Fire Research Report

International Approaches to Reducing Deliberately Lit Fires: Prevention Programmes

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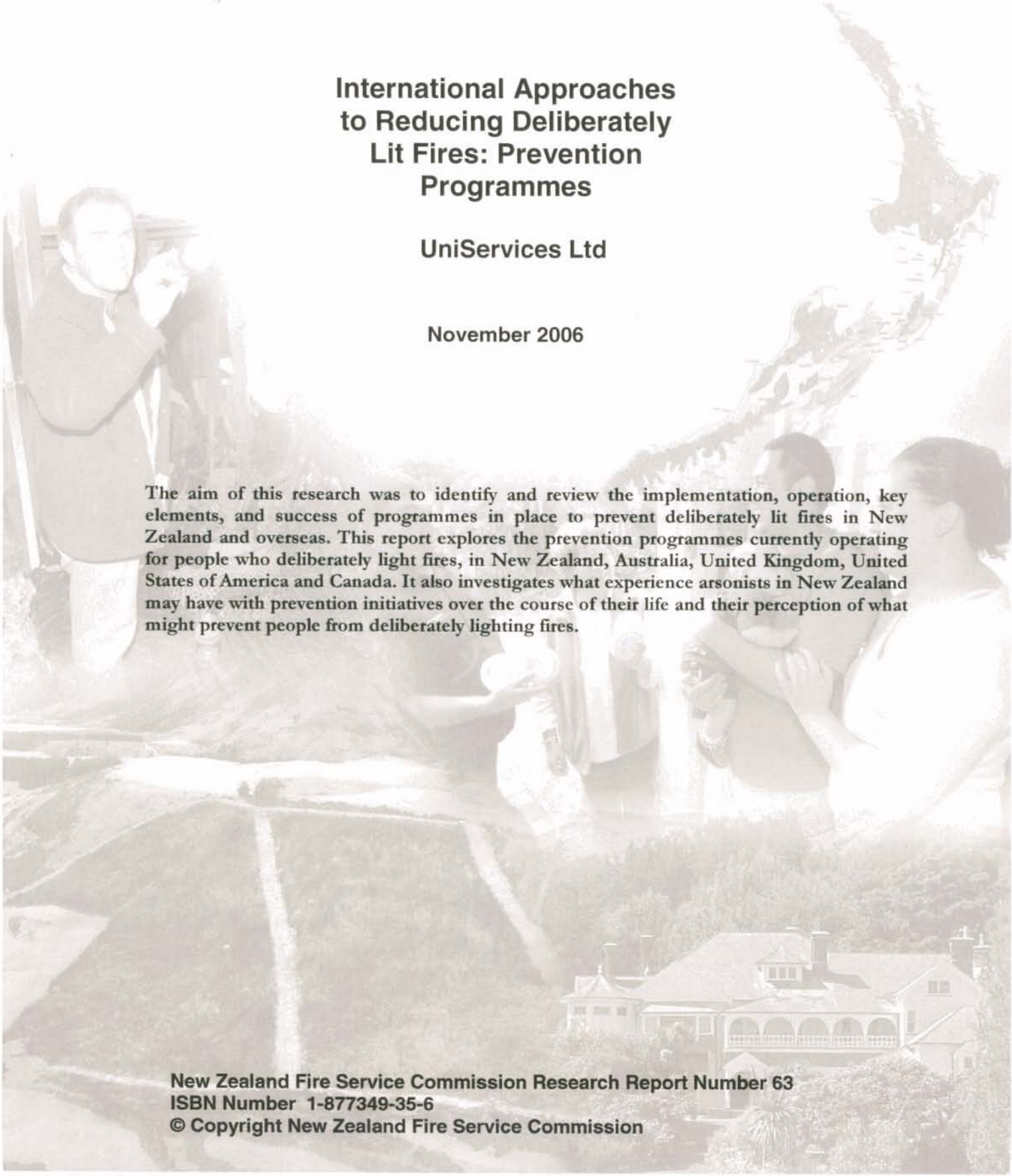
The aim of this research was to identify and review the implementation, operation, key elements, and success of programmes in place to prevent deliberately lit fires in New Zealand and overseas. This report explores the prevention programmes currently operating for people who deliberately light fires, in New Zealand, Australia, United Kingdom, United States of America and Canada. It also investigates what experience arsonists in New Zealand may have with prevention initiatives over the course of their life and their perception of what might prevent people from deliberately lighting fires.



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International approaches to reducing deliberately lit fires:

Prevention Programmes

Final Report

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Executive summary and recommendations

This study arose from the Contestable Research Fund from the New Zealand Fire Commission. It presents an exploration of prevention programmes currently operating for people who deliberately light fires, in New Zealand (NZ), Australia, the United Kingdom (UK), the United States of America (USA) and Canada. It also investigates what experience arsonists in NZ have had with prevention initiatives over the course of their life and their perception of what might prevent people from deliberately lighting fires.

A literature search was undertaken to review prevention initiatives for young people and adults who deliberately light fires. There has been relatively more research conducted on prevention initiatives for young people than adults. Two main approaches are evident: fire safety education and psychological therapy. Fire safety education is typically delivered by fire services and appears to be effective in increasing fire safety knowledge and reducing fire lighting recidivism, particularly if it is skills based. Cognitive-Behavioural Therapy (CBT) and family therapy appear to be effective in addressing the psycho-social factors associated with fire lighting and is consistent with the evidence that factors associated with individual fire lighting behaviour, such as family disorganisation, needs to be addressed along with fire lighting. Collaboration between services providing education and therapy services appears to be the best model for effective intervention

The literature for adults who have deliberately lit fires is relatively sparse but what there is suggests that multi-focal interventions with Cognitive-Behavioural Therapy components tend to provide a better quality of life for the individual as well as a cessation of fire lighting.

The existing research is primarily based on case studies or small samples with limited follow-up. Many prevention programmes have not been systematically evaluated. More randomised controlled studies and programme evaluations are necessary to provide information about the impact of interventions and the relative efficacy of alternate interventions. Given the heterogeneous nature of this population, more systematic research is also required into the best fit between the factors contributing to fire setting and particular interventions to address them.

National and international surveys of services delivering prevention initiatives (specific programmes or therapy) to fire lighters was conducted to review their implementation, operation, key elements, and success. Twenty-nine fire services participated, three mental health services, two forensic mental health services, one

psychiatric hospital, two general hospitals, one residential treatment service, one training service and one private psychologist. Services were grouped according to the type of interventions they provided, Educational, Therapy or Combined.

Interviews were also conducted with eight adults with at least five arson convictions and who were serving custodial sentences in NZ. These interviews explored what experience arsonists have had with prevention initiatives over the course of their life and their perception of what might prevent people from deliberately lighting fires.

The conclusions from the literature review, surveys and interviews include: Factors that contribute to successful outcomes included a fire skills education and home safety assessment intervention; educational interventions being delivered by fire fighters in uniform; educational interventions being conducted in the client's home; non-judgemental and empathetic practitioners; obtaining the support of the caregivers and involving them in the interventions; addressing any correlated psycho-social issues the clients' may have; working collaboratively with various services (e.g., fire services, mental health, Police); staff training, and adequate resources.

Barriers to programme effectiveness were identified as being lack of support for the programmes within the wider services; lack of funding, lack of collaboration of other services, lack of formal cultural supervision, and poor quality screening tools that do not facilitate programme monitoring and evaluation.

Suggested solutions included updating the resources, developing an educational package for caregivers, increasing the follow-up period, ongoing training including communication skills, interviewing, psychology relevant to fire lighting, and ongoing peer mentoring.

Background and purpose of the study

This report presents an exploration of prevention programmes currently operating for people who deliberately light fires, in NZ, Australia, the UK, the USA and Canada. It also investigates what experience arsonists in NZ may have with prevention initiatives over the course of their life and their perception of what might prevent people from deliberately lighting fires.

Project aims

The aim of this study, as defined by the NZFS was to identify and review the implementation, operation, key elements, and success of programmes in place to prevent deliberately lit fires in NZ and overseas.

The specific aims of the project were:

1. To review the literature on international prevention programmes.
2. To describe from the perspective of fire prevention staff the key elements of their programmes.
3. To describe from the perspective of fire prevention staff, the stakeholders involved in these programmes.
4. To explore from the perspective of fire prevention staff how programmes are implemented.
5. To describe from the perspective of fire prevention staff how programmes evaluate their success.
6. To make recommendations to the NZFS in relation to the above issues.

In this chapter, the existing literature is reviewed. In the following chapters, the methodology of the study will be described and the results presented. This will be followed by a summary of findings, and based on these findings, recommendations are made.

This project is based on a proactive evaluation model (Owen & Rogers, 1999). This model is concerned with synthesising what is known in the existing literature about an issue or problem and reviewing the ways it has been addressed through programmes implemented in different locations. This approach involves comparing the practices of one programme against practices of other programmes anywhere in the world, to gain information that will assist in the development and improvement of current practice (Owen et al.).

Research methods selected included a mixed qualitative and quantitative survey approach (questionnaire and interview) and a review of secondary sources (e.g., programme manuals, published advertising and websites). Quantitative data was used to complement the qualitative notes. This approach enabled the sampling of participants around the world and allowed the researcher to explore the process issues with open-ended questionnaire items, requiring written answers, and in-depth interviews. Data was collected from five countries between June 2005 and July 2006.

Chapter 1: Literature review

In 2005, there were 8,517 deliberately lit fires reported to the NZFS (N. Challands, personal communication, October 11, 2006) and 2,022 recorded arson offences (L. Mackie, personal communication, August 9, 2006). Young people under the age of 17 years accounted for 57% of the apprehensions for arson and people under the age of 21 years accounted for 75% of apprehensions (Statistics New Zealand, 2006). The financial cost of deliberate fire lighting is high, with deliberate structure fires in NZ resulting in damage of more than $33 million in 2005 (N. Challands, personal communication, August 7, 2006). Additionally, there are indirect costs that are not easily quantifiable, such as temporary housing, healthcare, human suffering. Young people are five times more likely to die in fires than any other age group except persons over 75 years old (Pinsonneault, 2002a) and around one third of children who die in fires actually set the fires that killed them (Hall Jr., 2000). Given the high financial, and human, costs of deliberate fire lighting, prevention initiatives need to be identified, their outcome evaluated, and their practice disseminated with the aim of reducing this problem.

In this chapter, the terminology used to describe fire lighting will be defined and the literature on prevention initiatives for people who light fires will be reviewed. A literature search was conducted by accessing databases such as PsychInfo and Medline and through the reference lists of key articles. Criteria for inclusion in this review were that the studies of prevention initiatives must have been published and included outcome or evaluative data.

Terminology

The involvement of young people in fire lighting has typically been conceived of having three main stages of development: fire interest, fire experimentation and fire setting.

Fire interest describes curiosity about fire without direct participation in fire lighting behaviour (Putnam & Kirkpatrick, 2005). Fire interest is experienced by most children between the ages of 5 and 10 years old (Gaynor & Hatcher, 1987; Grolnick, Cole, Laurenitis, & Schwartzman, 1990; Kafry, 1980). It typically involves questions about fire, fire being incorporated into play, or the collection of fire props (e.g., fire hats) (Gaynor, 1991; Kolko, 1999).

According to Gaynor and Hatcher (1987) fire interest can develop into fire safe behaviours or fire risk behaviours. Fire safe behaviours develop when young people learn to handle fire competently in supervised settings. Fire risk behaviours are represented by fire experimentation and fire setting, and empirical data suggests they develop with the influence of risk factors such as heightened fire interest, difficulties in family environment, and stressful life events (Gaynor, 1991; Kolko & Kazdin, 1991; MacKay et al., 2006). Heightened fire interest has also been found be a risk factor for adult arson (Rice & Harris, 1991).

Fire experimentation involves direct participation in fire lighting behaviour, and usually emerges between the ages of 5 and 10 years old. It is typically associated with a low level of recidivism, is unplanned, makes use of available materials, and the young person typically tries to extinguish the fire or goes for help (Gaynor et al., 1987). Access to ignition materials, premature assumption of responsibility for fire activities, and a perception by the child that their caregivers will not punish them are associated with the occurrence of fire experimentation. Approximately 50% of children experiment with fire at least once in their lives (Grolnick et al., 1990). First incident fire experimentation results in fires 33% of the time and experimenting more than once is likely to result in fires 88% of the time (Lewis & Yarnell, 1951). Fire experimentation has also been called 'fireplay'. However, the authors concur with Wilcox (2003) that the term 'fireplay' sends an ambiguous message about the seriousness of the behaviour.

Fire setting describes the act of intentionally participating in fire lighting. Fire setting is usually recurrent, planned, involves the use of acquired ignition materials and a specific target. After a fire has been set the young person typically watches the fire burn and then runs away (Gaynor, 1991). Fire setting often occurs within a constellation of other externalising behaviour problems, such as aggressiveness, theft, and rule breaking (Dadds & Fraser, 2006; Forehand, Wierson, Frame, Kemptom, & et al., 1991; Heath, Hardesty, Goldfine, & Walker, 1985; Kosky & Silburn, 1984).

Arson is a legal term that specifies the parameters of a crime. In NZ, the Crimes Act ("Crimes Act, 1961") defines the offence of arson as a crime against the rights of property. It can be summarised as intentional or reckless damage by fire or explosive to any property, vehicle, ship or aircraft, which is due to reckless disregard for safety or endangers life. In addition, the offender has no interest in to the property, and intends to benefit from the arson or to cause loss to others. The term arsonist refers to someone who has been convicted for committing one or more arsons and is typically applied to adults. According to the Crimes Act, 1961, for young people to be considered to have committed the crime of arson they must be at least 10 years old, and if under the age of 14 years old, they must be aware that their fire lighting behaviour was wrong or

against the law. There is some evidence to suggest that adult arsonists typically engage in fire setting behaviour as young persons (Gaynor, Huff, & Karchmer, 1986; Rice et al., 1991).

Pyromania is a term commonly applied to adults who take part in multiple deliberate incidents of fire lighting, typically experience tension or arousal before starting the fire; pleasure, gratification or relief in setting the fire or watching it burn, and a fascination or attraction to fire and its situational contexts (American Psychiatric Association, 2000). It is thought to be extremely rare (Geller, 1992).

For the purposes of this report, *deliberate fire lighting* will broadly refer to fire experimentation and fire setting. This definition would also include fires that meet the legal definition of arson and those lit by people with a diagnosis of pyromania. The term *fire lighters* will refer to those young people and adults who engage in deliberate fire lighting.

Prevention initiatives with reported outcomes

The term *prevention* encompasses primary prevention programmes directed toward the general population, secondary prevention programmes aimed at young people known to be a fire risk and tertiary prevention programmes aimed at preventing recidivism.

Prevention initiatives for young people

Primary and secondary fire prevention initiatives typically involve fire safety education. Typical examples of primary prevention initiatives included 'The children's television workshop's fire safety project' (The Children's Television Workshop, 1982). This was a national programme based in USA that teaches preschool children fire safety education through vignettes as part of the children's programme 'Sesame Street' and within school settings. The programme has not been evaluated but case reports from teachers suggested that the children who completed the programme learnt fire safety.

The 'learn not to burn' programme (National Fire Protection Association, 1979) was another fire education programme delivered in schools by teachers. It included fire protection behaviours (e.g., fire escape plans), fire prevention (e.g., safe use of matches) and fire persuasion behaviours (e.g., teaching others about fire safety). Those students who participated in the programme were found to have better fire knowledge, and parents and teachers rated the programme highly (Gaynor et al., 1987).

McConnell, Leeming and Dwyer (1996) also found that 3 - 5 year old children demonstrated significantly more fire safety knowledge after receiving the eighteen week 'Kid Safe' programme, than the no-programme control group. Jones, Kazdin and Haney (1981) reported on the efficacy of training emergency fire escape procedures with older children. They simulated nine home fire emergencies and taught the correct responses to five children between the ages of 8 and 9 years old through verbal explanation, practice, feedback and rewards. They reported that two weeks after the training all five children demonstrated significant improvement in their fire safety skills.

Franklin et al. (2002) reported the results of their randomised controlled study of a tertiary fire safety education based programme. Young people who had deliberately lit at least one fire and were referred to the 'Trauma Burn Outreach Prevention Program', (TBOPP), were randomly assigned to a fire safety education group or a no education group. A multi-disciplinary team including nurses, trauma surgeons and firefighters delivered the programme. Programme content focused on the consequences of deliberate fire lighting and emphasised individual responsibility. Caregivers were expected to attend with the young people. It included a tour of a burns unit, a video that highlighted the physical consequences of burns, counselling with graduates of the programme and burn victims and their caregivers were provided with fire safety equipment (e.g., smoke detectors). The 'no education' group either did not receive any intervention, or had one visit from a firefighter, the content of which is not described. Participants were followed up between 8 months and 2.5 years after the programme was delivered. They found that 36% of the 'no education' group and 0.8% of the 'education' group had deliberately lit another fire. The authors also noted that the fire lighting behaviour of the single recidivist participant in the 'education' group did reduce after the programme and that their extensive psychiatric history may have been a factor in their continued fire lighting. They attributed the success of the programme to the multi-disciplinary approach, involvement of caregivers, provision of safety equipment, and the involvement of graduates of the programme and burn victims.

Tertiary prevention initiatives for fire lighting behaviour involving therapy have also been reported. Psychodynamic therapies were one of the first to be reported with young people who light fires (Stekel, 1924). They tended to focus on the therapeutic alliance between the young person and the therapist and/or relations between the mother and young person (Awad & Harrison, 1976). Although case studies have been described in the literature, such approaches have not been systematically evaluated.

Case studies have also been used to report the efficacy of behaviour therapy with young people who deliberately light fires. Carstens (1982) described a work penalty system with a 4 year-old-boy who had set

fire to his parents bed. If matches or lighters were found he was to engage in one hour of physical work, such as cleaning the kitchen floor with a toothbrush. At six months follow-up, no further incidents of fire lighting were reported.

Holland (1969) presented the case study of a 7 year-old-boy successfully treated for regular fire experimentation over a three month period by a combination of punishment (i.e., threatening to destroy his baseball glove) and positive reinforcement. Varying amounts of money were given for every match the child brought to his father over eight trials; after being instructed to light matches in front of his father he was given a monetary reward for every one he did not strike, and praise eventually phased out the use of money as a reward. There were no fire lighting incidents over the next eight months.

Kolko (1983) presented the case study of a intellectually disabled 6 year-old-boy who was treated with a combination of negative corrective practice and positive reinforcement after lighting a series of fires, the most serious of which involved setting a car with a dog inside on fire. The child was instructed to light a fire under supervision, extinguish it and clean up on a variable schedule over a number of weeks. Eventually this was eliminated altogether as he increasingly responded that he did not want to light a fire. In addition, every day that he did not set a fire his mother gave him a piece of a puzzle that could later be exchanged for a reward. Fifteen months after the end of treatment, no other incidents of fire lighting were reported.

Wolff (1984) reported the success of stimulus satiation with a 7 year-old-boy who presented with deliberate fire lighting behaviour in the context of other problems. Treatment took place in a residential setting and over one 100, 30 minute sessions he was instructed to light as many matches as he liked. The number of matches lit over the sessions did not decrease although he stated he was 'sick of lighting them'. No fire lighting was reported at two-year follow up. However, more recent research suggests that such satiation approaches may actually reinforce fire lighting by enhancing the young persons already over inflated sense of control (Grolnick et al., 1990).

The efficacy of family therapy with young people who light fires and their caregivers has also been reported. One of the earliest case studies was described by Eisler (1972) who conducted family therapy with a 14 year-old-boy and his family following several large grass fires. The family had been experiencing significant changes (e.g., the father had returned to live at home) and therapy focused on helping the family cope with these changes. Therapy involved six, two - three hour sessions during which the family members communicated how they felt within the family and comprised a list of grievances about one another that were discussed. No more incidents of fire lighting had occurred after four months or at the one-year follow-up.

Minuchin (1974) presented the case of a 7 year-old-girl and her family following multiple episodes of fire lighting. The mother was instructed to teach her daughter how to safely light and extinguish matches during therapy. The therapist during sessions also modelled concern for the child's safety and gentle questioning, which was practised by the mother. The fire lighting was reframed as curiosity and the child's awareness of the potential consequences of her fire lighting was explored. Her fire lighting ceased after the first session and had not returned at two-year follow-up. Similarly, Madanes (1981) presented the case of a 10 year-old-boy who was the oldest of five children and part of a family that were experiencing difficulties (e.g., the father had moved away and they had no other means of financial support). The young person was shown how to safely light and extinguish matches and was instructed to practice under supervision by his mother. This replaced what usually occurred when the mother found her son lighting matches (i.e., she burnt him with them). Madanes reported that by changing this interaction between mother and son, the hierarchy between them was restored and the fire lighting behaviour ceased. These two case studies involved changing the hostile styles of communication that existed between the children and their parents and used fire safety education to strengthen their relationship with one another. Zingaro and Wagers (1992) described the combined use of family therapy and hypnosis with a 6 year-old- boy and his family, whose fire lighting behaviour subsequently ceased at two year follow-up.

Fire safety education has been paired with therapy approaches with some success.

McGrath, Marshall and Prior (1979) described combining behaviour therapy with fire safety education with an 11 year-old-boy. The child was instructed to light fires, extinguish them and clean up under supervision while verbalising the dangers of fire and fire safety rules. He was also taught social skills training through modelling, role playing and practice; and he viewed video tapes of a boy lighting fires and experiencing negative consequences, and others where he did not light fires. The authors noted improvements in his ability to cope with stress and engagement in social activities, and there were no more fires noted at two-year follow up. Koles and Jenson (1985) replicated the combination of therapy and fire safety education reported by McGrath and colleagues with a 10-year-old boy with a seven year history of lighting fires and multiple problems. Some additional components were included such as, relaxation training, a response cost for fire setting, a visit to a hospital burn unit and behavioural contracting to improve parental involvement. At one-year follow up all fire lighting behaviour had ceased.

DeSalvatore and Hornstein (1991) also described combining fire safety education with behaviour therapy in a psychiatric unit, with 4 - 12 year old children with histories of fire setting. Fire safety was taught to the

children in a didactic fashion, the children were instructed and had been modelled the appropriate way to light, and use matches. Family participation was encouraged and the caregivers were utilised as educators. Finally, the children completed a written or verbal test and a practicum to demonstrate an appropriate level of fire competency had been achieved. They then took a "Smokey the Bear" oath stating they would protect natural resources from fire.

Nishi-Strattner (2003) presented the Washington County (Oregon) Fire Academy Program, which also included the family in therapy. This programme paired fire safety education with parent training that addressed risk factors for fire setting such as lack of parental supervision, low parental use of rewards and use of punishment. The fire safety education was age appropriate and included the consequences of fire lighting and social skills for resisting peer pressure. Six percent of the 219 young people had set another fire when follow-up data was collected between three months and three years after programme completion.

Cox-Jones, Lubetsky, Fultz and Kolko (1990) also described the combination of fire safety education and behavioural family therapy with a 2.5 year old fire setter who had stopped lighting fires one year after treatment was completed.

Bumpass, Fagelman and Brix (1983) described the combined use of fire safety education and an emotion-cognitive graphing technique designed to bring into awareness the events and feelings associated with fire lighting. Twenty-nine young people aged 5 - 14 years old participated. Eight were assessed as not having fire lighting as their primary problem but all except four of the 29 participants had set multiple fires. Each emotional experience leading up to, during and after each fire lighting incident was graphed using a separate line, so that their pattern of intensity and relationship to the fire lighting was visually depicted. The children were taught how to recognise the onset of this pattern, interrupt it, and replace the fire lighting with a socially acceptable response to their feelings. The follow-up period ranged from 6 months - 8 years, with an average of 2.5 years. Twenty-six of the participants were contacted and 22 of these had ceased lighting fires. The authors note that six participants were recommended for additional therapy, which was not undertaken and these six were subsequently involved in other antisocial activities such as theft.

Bumpass, Brix and Preston (1985) later reported the efficacy of this same combination of techniques utilised by the Dallas Fire Prevention Programme, which represented a collaboration between the Dallas Fire Department and the University of Texas Southwestern Medical School. Trained fire service personnel delivered the intervention and referrals were made where appropriate to community mental health services for additional therapy. During its first year 150 young people between the ages of 5 and 13 years entered the

programme and only 2% were reported to have lit subsequent fires. In the same year, the number of reported fires lit by young people in the area also fell from 204 to 141.

McKinney (1983) also described the successful use of the graphing technique with the Juvenile Firesetters Prevention Program (JFPP), which was established under the auspices of the Houston Fire Marshall and supported by a team of psychologists, a child psychiatrist and social workers. The programme utilised a combination of fire safety education, graphing and therapy targeted towards the specific difficulties related to the fire lighting that each family was experiencing. If the father was absent from the family, a 'big brother' figure was also assigned to the family for 3 - 5 hours over one year. Seventy-three young people were followed up and none reported continued fire lighting, although the specific follow-up period is not provided by the author.

Research comparing alternative approaches have indicated the relative efficacy of skills based approaches to fire safety as opposed to discussion only. Williams and Jones (1989) investigated the relative efficacy of four different intervention strategies on the maintenance of emergency skills, with 48 school children between the ages of 7 and 10 years old who had indicated a lot of fear of fire or getting burned during initial assessment. Participants were randomly assigned to one of four groups: fire safety training, fire safety/fear reduction training, attention control, and wait-list control. The fire safety training group was instructed to verbalise pre-learned fire safety steps in response to target situations. The fire safety/fear reduction group were instructed to engage in self-instructions while making self-control statements in response to specific fear inducing situations (e.g., hearing a fire burning in their house). The attention control group were involved in discussions of fire related incidents, storied and drawing pictures of various fire prevention activities. The wait list control group were given assessments only. Post-intervention assessment revealed significant improvements for the two experimental groups and no improvement for the two control groups. A greater level of response maintenance for the fire safety/fear reduction group was noted and attributed to the self-instruction element that may have provided more meaningfulness to the task and enhanced rehearsal.

Kolko, Watson and Faust (1991) also reported the relative efficacy of fire safety skills training over more open-ended fire awareness discussions with 4 - 8 year old fire lighters in a psychiatric setting. Twenty-four children were randomly assigned to one of the two groups. The fire safety skills training consisted of instruction about the characteristics of fire, safe fire use and personal fire safety (e.g., get help). The fire awareness discussion involved taking a full history, discussion of each child's recent use of fire and fires that had occurred within their locale. Participants were followed up after six months and parental reports

indicated that 17% of the fire safety skills group and 58% of the fire awareness discussion group had engaged in further fire lighting. The fire safety skills group also reported less fire interest and an increase in fire safety knowledge.

In their controlled evaluation of alternative approaches, Adler, Nunn, Northam, Lebnan and Ross (1994) suggest that fire safety education has similar outcomes to skills based therapy, which included education and the graphing technique. Their participants consisted of young people referred to the Juvenile Fire Awareness and Intervention Program (JFAIP) in Melbourne, Australia. One hundred and thirty-eight young people between the ages of 5 and 16 years were randomly assigned to an education only group who received a pamphlet on fire safety or a combined group, which received education, satiation, response cost for fires and emotion-cognitive graphing. Both interventions were delivered by fire service personal. Young people assessed as being pathological fire setters were also offered specialist treatment in addition to the intervention provided in the group they were assigned to. At the one-year follow-up, 43% had not set any more fires and an additional 15% had set fewer fires. A reduction in fire lighting was noted across both conditions without any significant differences. Following this study, the JFAIP was modified so that the fire service personal delivered fire safety education and mental health specialists provided other therapy.

In contrast, a recent study by Kolko (2001) found significant differences between groups who received education and those who received a more skills based intervention. Kolko compared the efficacy of fire safety education with cognitive-behavioural therapy (CBT) and a brief intervention that paralleled the intervention commonly provided by the fire service programmes at the time. Thirty-eight young people between the ages of 5 and 13 years old were randomly assigned to each of the fire safety education and CBT groups. Those who received the brief intervention were already scheduled to meet with fire service personnel. Fire safety education involved instruction in fire safety skills by firefighters. They were taught about the consequences of fire and prevention strategies, including saying “no” to match play and exiting a burning house. Parents were also involved and received a similar curriculum. CBT was provided by mental health professionals and included the graphing technique, social skills and assertiveness training, problem solving and brief parent behaviour management. The brief intervention consisted of two visits to the child and caregivers at their home by a firefighter. Both the caregivers and the child were provided with information about the dangers of fire, age-appropriate resources, a home safety handout and a contract with the child not to set more fires. The second visit consisted of a review of the topics covered during the first visit. Immediately post-treatment and at one year follow up, the fire safety education and CBT interventions were found to be more effective in reducing both the frequency of fire lighting and fire interest than the brief

intervention. Kolko notes the difference in findings between his study and Adler et al. (1994) and identified the reasons as being his use of programme manuals for each intervention, mental health professionals to deliver the CBT intervention, lower drop-out rates, a shorter intervention, and a less dysfunctional, younger sample.

It appears that fire safety skills training is best delivered by the fire services and therapy is best delivered by mental health professionals (Adler et al., 1994). This suggests that a collaborative approach to prevention provision is most appropriate. This is supported by a recent study (National Association of State Fire Marshals, 2000) that explored the success of four programmes in the USA that followed a collaborative model and included fire safety education, therapeutic activities and follow-up as part of their intervention: Columbus, Ohio; Phoenix, Arizona; Portland Oregon; and Rochester New York. The most important contributor to their success was found to be the partnerships between organisations, such as the fire service, law enforcement and community services. All of the programmes had a comprehensive system for referrals to and from their programmes. In addition, programmes that emphasised in-depth counselling were more successful. These findings were also supported by the research of Webb, Sakheim, Towns-Miranda and Wagner (1990) who reiterated the importance of close collaboration between services and aggressive outreach to identify young people who require preventative services.

Prevention initiatives for adults

Delshadian (2003) described the use of art therapy with one female convicted arsonist within Holloway Women's Prison, who had a history of sexual abuse and family disruption and was self-harming at the time. Regular art therapy sessions were conducted that focused on mediating between verbal and non-verbal, acting and thinking. She was also given a diary and art materials to use in her room between sessions. The author did not report any long-term evaluative data but did report that while in therapy her incidents of self-harm and fire setting reduced significantly.

The majority of the existing research of prevention initiatives for adults who had deliberately lit fires used samples drawn from populations of mentally disordered offenders within psychiatric institutions.

Royer, Flynn and Osadca (1971) presented a case study of a male resident of a psychiatric hospital who had a diagnosis of schizophrenia and a history of lighting fires. A behavioural aversion technique was used to eliminate the fire lighting by the application of electric shocks when fire related words were read from a series of cards or paper was lighted. The electric shock was set to a level it would produce discomfort. The

authors noted that more electric shocks were given after the initial therapy when additional fire lighting occurred (five additional fires were lit). Following these, there were no more reported fires within the four year follow-up period. It should be noted that ethical considerations now days disallow the use of such aversive strategies.

Rice and Chaplin (1979) reported the success of social skills training with a sample of ten mentally disordered offenders within a psychiatric hospital. Post-testing revealed improvements in social skills and at one-year follow up none of the participants had been involved in fire lighting. Timmerman and Emmelkamp (2005) investigated the impact of CBT with 29 inpatients in a high-security psychiatric hospital with a variety of primary offences. Only 18% of participants had committed arson offences. CBT focused on behaviour modification through reinforcement, shaping, modelling and giving time out. Irrational thoughts were also challenged. Improving social and coping skills, reducing negative emotions, and improving social awareness were all targets of change during treatment. As a group, participants showed improvements in their coping skills, interpersonal functioning and well-being. Those with arson offences demonstrated more improvement than those with sexual offences on self-report measures. However, only a minority of individuals demonstrated reliable change over time.

Psychopharmacological treatment was evaluated by Parks et al. (2005) in a case study of a 20 year-old-male who met the DSM-IV criteria for pyromania and was treated with olanzapine and sodium valproate. Neuropsychological pre- and post-treatment testing indicated improved cognitive functioning and fire lighting reportedly ceased. However, no long term follow-up regarding his fire lighting behaviour, or feelings before or about lighting fires was undertaken.

A number of recent studies have investigated the treatment of mentally disordered adults with intellectual disabilities who have deliberately lit fires. Clare, Murphy, Cox and Chaplin (1992) presented the case of a 23 year-old-male residing in a psychiatric facility for people with intellectual disabilities after he had been deliberately lighting fires. A multi-disciplinary approach to treatment was taken on the basis of a comprehensive assessment of his motivation for setting the fires. Treatment was primarily CBT and consisted of social skills training, graded exposure to holding matches to desensitise him to fire lighting, and coping strategies for distressing feelings and life stress. Academic education and surgery for a harelip and cleft palate to improve his speech were also included. Following the initiation of treatment, both hoax calls and fire lighting within the facility ceased. Moreover, at four-year follow-up no fires had been set, although he

admitted to being tempted during times of stress. He was also living in the community with a full time job and he was in an intimate relationship.

Swaffer, Haggett and Oxley (2001) described a treatment programme for mentally disordered adults who had deliberately lit fires in Rampton Hospital in UK, and present the case of Sharon. The treatment programme consists of individual and group work over a 16-month period and involves learning about the dangers of fire, skills development (e.g., assertiveness, anxiety management, and conflict resolution), developing insight and self-awareness, and relapse prevention. Post-treatment evaluation was not available but Sharon was assessed as doing well at completion of the skills development section.

Taylor, Thorne, Robertson and Avery (2002) described an approximately 40 session CBT group intervention delivered to 14 mixed gender mentally disordered inpatients of Northgate Hospital, in UK, with intellectual disabilities who had a history of lighting fires. Treatment was aimed at reducing fire interest and attitudes towards fire and was similar to that outlined by Swaffer et al. (2001). Post-treatment tests indicated reductions in fire interest, improved attitudes toward fire and the development of new coping skills.

Taylor, Thorne and Slavkin (2004) presented case studies of four male mentally disordered inpatients with intellectual disabilities who participated in the group outlined earlier. The authors report that the therapy was able to engage all four participants and all responded favourably to the group environment. Three of the men presented did not demonstrate reduced fire interest or improved attitudes to fire on the fire-specific self-report measures and only one demonstrated adequate understanding of how their fire lighting was risky. Two had modest gains on the self-esteem inventory and all four improved on the anger measure. Interestingly the participant that consistently showed more improvement across all measures was considerably younger than the other cases, at 22 years old. Palmer, Caulfield and Hollin (2005) also suggested that the lack of significant treatment gains for all participants may reflect an inappropriate match between pre and post treatment measures and an intellectually disabled population.

In a later pilot study, Taylor, Robertson, Thorne, Belshaw and Watson (2006) investigated the efficacy of the same CBT group intervention with six female mentally disordered inpatients with intellectual disabilities. All but one of the cases had set multiple fires in the past. The authors similarly reported that all participants were engaged in the programme and at two-year follow-up none of the cases had reportedly lit more fires. However, these cases were still in the facility or living in community placements with intensive support and active risk management plans, so the long term effects of the programme for these people once independent is difficult to determine.

Summary

Many of the fire safety education programmes for young people were delivered by the fire services. Research indicates that the inclusion of fire safety skills training to any intervention programme is useful and on its own can contribute to better personal fire safety skills and knowledge than simply discussing fire safety. Many fire service programmes have not been formally evaluated and they typically vary from one another in the interventions they provide. It is difficult to ascertain the relative impact that the different forms of these programmes might have.

All of the therapies were reportedly successful, although there is some relatively recent evidence that satiation practices are not efficacious and while family therapy appears to effectively address issues within the family, it is not clear whether the individual risk factors for their fire lighting behaviour could be addressed with this approach alone. Due to their reliance on single case studies, it is difficult to know with any certainty just how effective these different types of therapies are.

From the literature we can conclude that a collaborative approach to the prevention of fire lighting, where the fire services deliver fire safety skills education and mental health professionals deliver individual and family therapy, can lead to early identification of fire lighters and better outcomes for them and their caregivers.

The existing literature for adults who have deliberately lit fires is relatively sparse but what there is suggests that multi-focal interventions with CBT components tend to provide a better quality of life for the individual as well as a cessation of fire lighting.

Most of the existing literature was conducted during the 1970s and 1980s and consists of case studies that cannot be generalised across the heterogeneous population of individuals who light fires. Since the 1990s, there have been relatively more group studies with young people comparing different interventions. However, more randomised controlled studies and programme evaluations are necessary to provide information about the impact of interventions and the relative efficacy of alternate interventions. Most of the interventions reported are short-term and do not provide long-term follow up, with the majority favouring one year and some providing as little follow-up as immediate post-intervention. Future research should evaluate the effect of treatment length and include more long-term follow-up.

The majority of studies report on whether their participants have continued to light fires following treatment but very few indicate whether they have engaged in other antisocial activities. Future research should measure this, given the tendency for fire lighting to co-occur with other types of externalising behaviours.

The existing research also fails to tell us what intervention approaches work best with different fire lighters. Given the heterogeneous nature of this population more systematic research is required into the best fit between the factors contributing to fire setting and interventions to address them.

Finally, the existing literature does not contain interviews with the people who actually lit the fires, nor the people who delivered the interventions. Interviews examining perceptions about what is currently successful in stopping continued fire lighting, or what could be successful in reducing the number of deliberately lit fires is needed.

Chapter 2: Methodology

Participants

Participants were purposefully selected from services providing interventions for people who had deliberately lit fires. That is, rather than a random selection process, participants who delivered interventions to people who deliberately lit fires or managed a programme that provided interventions for fire lighters were targeted for participation on the basis of their expert knowledge within the area of preventing deliberately lit fires. These participants were drawn from services in NZ, Australia, UK, USA and Canada. Interviews were also conducted with eight adults who had five or more arson convictions and were serving custodial sentences within the public prison system in NZ.

Services

Services that provided interventions for people who had deliberately lit fires were identified and approached to participate in the study. In NZ, there was one prevention programme operated by the NZFS, the Fire Awareness Intervention Programme (FAIP). Internationally, 28 fire services participated, three mental health services, two forensic mental health services, one psychiatric hospital, two general hospitals, one residential treatment service, one training service and one private psychologist. Participant responses were grouped according to the service they were employed. The services were grouped according to the type of interventions they provided, *Educational, Therapy* or *Combined*. Educational interventions were primarily provided by fire services, although not exclusively. Therapy (e.g., CBT) was primarily provided by mental health services, although not exclusively. The *combined* group was comprised of services that facilitated both educational and therapeutic interventions. These were not necessarily delivered by the same service but if different services were involved, coalitions existed and pathways for interventions were formalised. Typically, fire services and mental health services worked in partnership within the *combined* group.

In Australia, participant services included five that offered educational interventions and two services that offered therapy only. In UK, seven services providing educational interventions participated, two services providing therapy only and one service offered both educational and CBT interventions. In USA, thirteen services participated in providing educational interventions, one that provided therapy and five that provided educational and therapy interventions. In Canada, all three participating services provided combined education and therapy.

Programme directors

The term *programme director* describes those people within the participating services who manage or co-ordinate the programme(s) for their clients[1] who have deliberately lit fires. In NZ, four regional co-ordinators from the FAIP and one regional commander participated in this project. International participants included four programme directors from Australia, five from UK, two from Canada, and fourteen from USA.

Programme staff

The term *programme staff* describes people employed by participating services and involved in delivering the intervention. In NZ, 24 practitioners from FAIP participated. Additionally, commentary on cultural issues relevant to NZ and FAIP was provided by the NZFS National Māori Advisor who is responsible for promoting and developing fire safety programmes throughout Māori communities in New Zealand. International participants included eighteen programme staff from Australia, nine from the UK, five from Canada, and eleven from USA.

Adults with at least five arson convictions in New Zealand

Table 1 presents demographic information for the eight adults who participated in this project, with at least five arson convictions in NZ, and who were serving sentences with the Department of Corrections. These participants ranged in age from 17 years old - 53 years old (average age 33 years old). Five identified their ethnicity as Pakeha and three as NZ Māori. They were all males and the number of arson convictions they had at the time of interview ranged from 6 - 20. Three stated that they always deliberately lit fires on their own, and four stated that they were always in the company of others. One participant stated that he was either on his own or with one other but never with a group of people.

[1] The term 'clients' refers to both the fire lighters and their caregivers

Table 1: Demographic information for participants with arson convictions in New Zealand serving sentences with the Department of Corrections at the time of interview

Participants	Age* (years)	Gender	Ethnicity	Number of arson convictions**
01	53	Male	Pakeha	20
02	39	Male	NZ Māori	9
03	24	Male	Pakeha	8
04	21	Male	Pakeha	7
05	41	Male	Pakeha	7
06	47	Male	NZ Māori	6
07	21	Male	Pakeha	6
08	17	Male	NZ Māori	6

*At the time of interview
**Number of charges with convictions for arson offences as recorded by Department of Courts, New Zealand and supplied by the Department of Corrections

Measures

Two different surveys were developed as part of this research project. These were designed to gather information about the implementation, stakeholders, measures of success and key elements of prevention initiatives for people who deliberately light fires. An interview schedule was also developed to explore the history of fire lighting and experience of prevention programmes by adults who had committed arson.

Before developing the surveys, the researchers met with NZFS personnel to acquire a general understanding the processes to be studied and information to be gathered. Experts in the areas targeted by the measures (e.g., programme directors) reviewed them to ensure that the items corresponded with the aims of the study. Feedback was received and the measures were revised to take into account items that were revealed as redundant, issues around clarity of items and additional information required.

All surveys could be completed as self-report questionnaires or as interviews with the researchers. The surveys each contained between four and ten sections that corresponded to key areas of enquiry. Each section requested descriptive information and explored participant perspectives and recommendations for change. The surveys combined questions requiring a forced choice response and questions requiring a narrative response. The forced choice items are succinct and facilitate comparison and statistical

aggregation of the data, that is, quantitative analysis. The narrative comments from open-ended questions contribute depth and human perspective to the data (Patton, 1987), and were analysed using qualitative analysis. There was considerable scope within this framework for participants to identify and comment in detail on issues that they themselves considered most relevant and meaningful. Service participants were also given the opportunity to forward any documentation and statistical data to assist them in completing the surveys.

Prevention and intervention strategies for children, adolescents and adults who deliberately light fires: Programme director survey (Appendix A)

This survey was intended for programme directors and has ten sections that gathered information about programme implementation and context, programme goals, staff characteristics, stakeholder relationships, cultural services, budget, the intervention provided, client demographics, and data collection and programme evaluation. With permission from the authors, some items in this survey were based on the 'Juvenile firesetter intervention program survey' developed by Kolko, Pinsonneault and Okulitch (1999). This survey was available for participants to complete on paper, as a word document, online via a secure internet link or as an interview with the researcher.

Prevention and intervention strategies for children, adolescents and adults who deliberately light fires: Programme staff survey (Appendix B)

This survey was intended for programme staff and has seven sections that gathered information about staff training, cultural services, intervention provided, programme services and key elements, resources, follow-up, characteristics of the fire lighters, and programme performance. With permission from the authors, some items in this survey were based on the 'Juvenile firesetter intervention program survey' developed by Kolko et al. (1999). This survey was available for participants to complete on paper, as a word document, online via a secure internet link or as an interview with the researcher.

International approaches to reducing deliberately lit fires Interview: The perception of what works, from people who have deliberately lit fires (Appendix C)

This interview schedule was developed for adults with at least five arson convictions. It has four main sections that gathered information about the background of the participant, their history of deliberately lighting fires including motivational factors, their experience with prevention initiatives, and their perception of what may have helped them or could help others to stop lighting fires.

Procedures

Ethical approval was obtained from the University of Auckland Human Subjects Ethics Committee (Appendix D). The literature was reviewed and internet searches (e.g., the Idea Bank) conducted to identify services providing prevention programmes or therapy for people who had deliberately lit fires in NZ, Australia, UK, USA and Canada. Psychological, psychiatric and counselling societies in each of the countries were also contacted about the study to identify professionals who worked privately with people who had deliberately lit fires, or within services or specific prevention programmes. Services were contacted by telephone, email, or post and potential participants were identified. Potential participants were also identified by existing contacts in the area and by the snowballing of further contacts.

As required by the University of Auckland Ethics Committee, each organisation and participant received a written information sheet and provided written consent (Appendix E). This information sheet outlined the research project and included a statement that participation was voluntary and that participation or non-participation would not affect their employment. Once consent had been obtained the relevant measure(s) was released to participants in the form they requested (e.g., emailed word document) or an interview was conducted. Interviews were conducted both face-to-face or via telephone and all were recorded by hand. Interviews were based on the measure relevant to the participant, excluding redundant items as they became apparent over the data collection process, and included exploration of issues the participant raised.

Table 2 presents the number of interviews and questionnaires completed in each country. In total, 13 interviews were conducted and 86 questionnaires were completed and returned. Over the course of data collection, two reminder letters were emailed out to participants. Data collection closed in July 2006. Participants returned completed questionnaires by email, internet link or post. Posted replies were received at the University of Auckland to ensure security and privacy of responses. In some cases, follow-up contact (email or telephone) was made with participants to provide added depth to their responses. Secondary sources, such as programme manuals, published materials such as brochures and service websites, which commented on the areas under study, were also reviewed and incorporated into the results of this project where relevant.

Table 2: The number of interviews and questionnaires completed in NZ and overseas, according to intervention type Education, Therapy or Combined

	Interviews	Questionnaires	Total
NZ	8	23	31
Overseas			
Education		49	49
Therapy		5	5
Combined	5	9	14

Procedure for participants with five or more arson convictions in NZ

The Department of Corrections in NZ provided consent for the researchers to interview adults with five or more arson convictions in NZ and identified potential participants who were serving custodial sentences at the time within the public prison system. Staff of the Department of Corrections approached all potential participants about the research and provided them with a consent form and an information sheet that outlined the study and included a statement that participation was voluntary (Appendix F). Once written consent was obtained, the documentation held by the Department of Corrections for each participant was reviewed, including psychological reports. One telephone interview and seven face-to-face interviews took place at public prisons around NZ between March and June 2006. The information sheet and consent form were reviewed again before the interviews commenced. All interviews were recorded by hand and interview data was cross-referenced with file documentation for accuracy of factual information provided during the interviews.

Data Analysis

A combination of deductive and inductive approaches was utilised. Deductive strategies are driven by existing knowledge in the area being studied and data is coded for specific research questions (Braun & Clarke, 2006). The deductive method used was content analysis. Content analysis involves quantifying data in terms of predetermined categories in a systematic and replicable way (Bryman, 2004). Inductive strategies allow themes or patterns in the data to be identified that may have little to do with the specific questions asked of the participants (Braun et al.). The inductive method used was thematic analysis. Braun

and Clarke describe thematic analysis as a 'method for identifying, analysing and reporting patterns (themes) within data' (p. 79). Thematic analysis takes a more interpretative approach than content analysis because patterns in the data are identified after the data has been collected rather than categories being decided prior to data collection and analysis. Themes capture important elements of the data in relation to the aims of the research project.

Questionnaire responses and interview data was reviewed and the researchers familiarised themselves with the data that had been collected. A word processor was used to organise responses to the measures. NZ data was analysed separately from the overseas data. Overseas participant responses were grouped according to the service they were affiliated with and then services were grouped according to whether the primary intervention they offered was educational, therapy or a combination of education and therapy.

Content analysis was used to generate descriptive information, such as programme descriptions and the interventions provided. Broad categories were developed based on the survey items and relevant text from the surveys and secondary sources was inserted under these categories. Analysis of secondary sources consisted of descriptive information relating to the services. The descriptive material was summarised for each intervention group.

Thematic analysis was used to identify patterns across the data set regarding how participants perceived their programmes, such as the factors that contributed to successful outcomes and barriers to programme effectiveness. The identified themes were further refined over time and by regular discussion in research meetings, which looked at the quality of the data obtained and checked consistency of the data analysis. Relevant quotes were entered in their entirety.

Spelling and grammatical errors were corrected and all spelling was standardised to NZ English. Selected participants were also given the opportunity to review the data (summarised in narrative form and tables) relevant to them. These participant checks were carried out as a way of checking the accuracy of factual material (e.g., service descriptions) and validity of data interpretations. This process led to further refinement of the data.

Triangulation was utilised to add validity to the findings by comparing and cross checking the consistency of information across multiple data sources and researchers (Patton, 1990). In this project, the perspectives of the programme directors and other programme staff were compared; the interview data with adults with five or more arson related convictions was compared with their file documentation; questionnaire responses and

interview data were compared; and the consistency between published documentation and participant responses was checked. When inconsistencies were identified between participant responses and documentation, the information in published or file documentation was included.

In reporting the results from participants, the descriptors “a few”, “some”, “most”, “all” are used rather than actual numbers. This is done in recognition that the participants were not necessarily representative of the available population, as would be the case in a randomly selected participant group. Rather they were purposefully chosen, or volunteered, thus comprise a convenience sample. The term ‘participant’ is used to refer to the individuals who participated in this study. The term ‘service’ is used to describe the collective responses from individual participants within each service. The term ‘programme’ is used to refer to the specific fire lighting programmes some services operated.

Chapter 3: Prevention programmes

NEW ZEALAND: THE NEW ZEALAND FIRE SERVICE (NZFS)

In NZ, the NZFS is the only provider of specific prevention programmes for people who deliberately light fires. The NZFS operates two main prevention programmes that work in tandem, each complimenting the other; the Fire Awareness Intervention Programme (FAIP) and the FireWise Programme. A brief description of the FireWise Programme follows. However, this report will concentrate on the FAIP because it is a prevention initiative targeted to people who deliberately light fires whereas the FireWise programme is a non-targeted educational programme.

NZFS FireWise Programme

The FireWise Programme is a national fire safety education programme for school students in years 1 and 2, 7 and 8 and senior secondary levels. The FireWise Programme for year 1 and 2 is also available in te reo Māori (Maui Tinei Ahi).

FireWise aims to: (1) educate school communities about fire safety through its fire safety packages; (2) identify and record incidents of fire, fireplay and vandalism around the school by maintaining a publicised record of all incidents and reporting them to the school Board of Trustees; and (3) minimise the potential causes of fire by employing fire safety check-lists, fire and evacuation drills, and enlisting neighbourhood support.

FireWise Programme packages have been delivered to every school in NZ. These packages are age-related and enable teachers to provide full fire safety education. NZFS personnel also undertake school visits and a NZFS Cultural Liaison Officer is available to assist with any cultural issues if they arise. Further information on the FireWise programme can be found on the NZFS website (http://www.fire.org.nz).

NZFS Fire Awareness Prevention Programme (FAIP)

The FAIP is a national educational programme for young people, and adults with intellectual disabilities and their caregivers. The aim of FAIP is 'to reduce the number of deaths, injuries and millions of dollars of

property damage caused by juvenile fire setting, through a trained firefighter delivered intervention programme'. It is a free and confidential service and participation is voluntary (except where the referral is part of the Child, Youth and Family Services, Family Group Conference process). It takes place at the fire lighter's home and is conducted by specially trained NZFS personnel (Youth Liaison Officers/Practitioners). Its teaching curricula include appropriate fire safety practices and the dangerous consequences of inappropriate fire use. The mission of the FAIP is:

> To reduce the incidence of fireplay and other related incidents in pre-adolescents, juveniles and at risk adults, by intervention and education, and to investigate the occurrence of fire setting and fire related behavioural problems associated with these groups (New Zealand Fire Service, 2006).

Description of programme characteristics

Implementation of the FAIP

The FAIP was first developed in 1992 in the fire region of Auckland. It was championed by a team of two committed NZFS personnel who had been receiving referrals from community health organisations for children lighting fires and recognised a need for a targeted intervention. The referrals continued to grow. As one participant stated "it was like taking the lid off, as the knowledge about the programme got out there so the referrals came on in". In 1996, a plan to nationalise the programme was developed. By 1998, FAIP was operational in the other seven fire regions within NZ and a National Co-ordinator was appointed for the programme. The programme has evolved over time, responding to the needs of the community and to research into the characteristics of people who light fires and related interventions.

Population served by the FAIP

The FAIP intervenes with individuals who have demonstrated fireplay or fire setting behaviour. Youth up to the age of 17 years and adults with intellectual disabilities have taken part in the FAIP. In the Transalpine region, the programme has also been delivered to some adults serving sentences for arson within the Public Prison Service, Department of Corrections.

Between July 2005 and June 2006, 624 fire lighters had gone through the FAIP. Of these 624 individuals, 9% were between the ages of 1 year and 5 years, 33% were between the ages of 6 years and 10 years, 42% were between the ages of 11 years and 14 years, 15% were between the ages of 15 years and 17 years, and less that 1% of the fire lighters were 18 years or older (adults). Seventy percent of these fire lighters

were recorded as Caucasian, 24% as Māori, 4% as Pacific Island and less than 1% as Asian or other ethnicity.

The most common motivations for their deliberate fire lighting were recorded by FAIP practitioners as being boredom (27%) and experimentation (26%). Peer pressure (12%), anger (7%) and attention seeking (4%) were also reported. Revenge and concealment of crime were reported by less than 1% of all fire lighters. However, 24% of fire lighters were unable to identify the motivation behind their deliberate fire lighting. Eighty-three percent of fire lighters reported that the fire(s) was not an accident.

Description of intervention the FAIP provides

The FAIP operates within 'best practice guidelines' created for the programme (New Zealand Fire Service, 2006). These guidelines recommend the following pathway for delivery of the intervention. Within two days of receiving a referral, the Regional Co-ordinator will allocate the case to a Practitioner. Ideally, two Practitioners will respond but if this is beyond the scope of regional resources one practitioner will deliver the programme. Within three days a phone call should occur, to make an appointment to meet with the fire lighter and caregivers and provide them an overview of the consent process and intervention. The programme should be delivered within ten days and has six stages that seek to break the fire setting cycle.

The first stage of the FAIP involves introducing the programme and building rapport with the fire lighter and caregivers, who are required to be present throughout the intervention.

The second stage of the programme involves explaining the consent form, including confidentiality, and acquiring written consent from the caregivers. The intervention cannot be carried out without written consent and following the intervention, a second consent form is signed confirming that the caregivers were present during the intervention and they were satisfied with the way it was carried out.

The third stage of the programme involves completing the Screening Profile Interview questionnaire. The questionnaire includes demographic items (e.g., age, ethnicity), current and past incidents of fire lighting, mental health history, and current and past family situation. It can be used to determine the appropriate strategy for programme delivery and issues relevant for referral to treatment services.

The fourth stage of the programme involves education and a home safety assessment of the house. The aim of the education component is to increase the fire lighters understanding of fire (e.g., the speed it spreads) and the consequences of unsafe fire use, and to develop fire safety awareness. Resources are

used to reinforce the education about the damage that can occur from fire and to reinforce their understanding of fire safety, such as photographs of structural fires and burns, DVDs of fires, burn victims and fire safety education workbooks and sometimes essays for adolescents. One staff participant reported utilising communication logs from real fires to demonstrate the chain of events when a fire occurs. Rewards can be used to reward abstinence from fire lighting, such as star charts for younger children and achievement certificates at the completion of the programme. The resources used are selected according to the age and developmental level of the fire lighter. Once the education component has been completed a home safety assessment of the house is undertaken with the fire lighter and caregivers. This includes pointing out and eliminating hazards, checking any smoke detectors are working correctly and installing smoke detectors if none are present, and the establishment of an escape plan and meeting place for the occupants of the house.

The fifth stage of the programme involves a second visit to review any homework left during the first visit and to assess progress. If necessary further appointments will be made to continue with fire education, otherwise the fire lighter will receive a certificate of completion.

The final stage of the programme involves a follow-up letter three months after the programme has been completed and asks about the fire lighters progress. A satisfaction questionnaire is also sent to the caregivers, which asks them their opinion of the FAIP.

Staff of the FAIP

The FAIP has a National Steering Group, a National Co-ordinator, eight regional Co-ordinators and Practitioners within each region. There are administrators in each region and a National Administrator that coordinates the statistics for the programme nationally. The FAIP also has a Consultant Clinical Psychologist to the programme, who sits on the National Steering Group. The Consultant is also available to advise on any questions the Practitioners have and to advise about referrals of fire lighters with complex needs.

All of the Practitioners work part-time with the FAIP and part-time as operational firefighters or fire safety officers. Seven of the Regional Co-ordinators are also part-time with the FAIP. The Transalpine region has the only full-time position in NZ established to service the high number of referrals in that region.

Training the FAIP Practitioners

All Practitioners undergo induction training of one week. This training includes techniques to establish rapport with clients, the consent process, the Screening Profile Interview questionnaire, the educational and fire safety component, programme resources, legislation, the role of stakeholder services, and characteristics of the people who light fires. Once this training has been completed, new Practitioners will accompany more experienced Officers to observe them delivering the programme. Since 2005, the FAIP also has an annual conference where Practitioners can network, share ideas and attend workshops on a variety of topics relevant to their work. Stakeholder services have also conducted seminars about the services they offer.

Stakeholders of the FAIP

The FAIP stakeholders include the NZFS, the public, schools, community health organisations and practitioners, social welfare services, the Police and other justice services. The FAIP has a formal agreement with Child, Youth and Family Service (CYFS) outlining when referrals to CYFS should be made.

Referral sources

Between July 2005 and June 2006, the FAIP received 26% of its total referrals from the public. This was followed by the Police (22%), then schools (16%), the NZFS (15%), Police Youth Aid (14%), Family Group Conference/Youth Justice Co-ordinator (3%), Public Health (3%) and CYFS Social Workers (2%). When an agency has made a referral to the FAIP they will receive a letter advising them of the outcome of the intervention.

Referral recipients

The FAIP refers fire lighters to community services when intervention beyond their programme is required. For example, if Practitioners suspect abuse or neglect or there is evidence of it, they are mandated to make an immediate referral to CYFS. The NZFS also has Clinical Psychologists, to whom referrals can be made. These referrals typically consist of high-risk youth with complex needs who may benefit from therapeutic intervention to address these issues. The Practitioners can also assist clients in finding appropriate community services. Typically, the FAIP will still be carried out although it may be undertaken at another time.

Cultural services

The NZFS has four Iwi Liaison Officers, each attached to two fire regions, and a National Māori Advisor. Those people are responsible for promoting and developing fire safety programmes throughout Māori communities in NZ. Iwi Liaison Officers providing cultural supervision is not formalised in NZFS policy. The NZFS also has Tongan and Samoan cultural groups made up of volunteers who have an interest in promoting fire safety within their cultural communities.

Measures of success

The FAIP measures its success by its recidivism rate. If fire lighters are re-referred to the FAIP within one year of the first referral, they are counted as recidivist fire lighters. If they are re-referred after one year, they are counted as new referrals. The assessment form for the caregivers also acts as a measure of the programme's success and comments from caregivers can be used to improve programme delivery.

To date, no independent process or outcome evaluation had been undertaken.

Outcome of the FAIP

Around 97% of the fire lighters who have taken part in the FAIP are not referred back to the FAIP within one year of completing the programme. All participants reported that the programme was effective, typically citing the recidivism rate, the response of the caregivers to the programme, or increased referrals to the programme indicating an awareness of the programmes' success within the community.

Typical comments included:

> I actually think it's pretty good but that may be because I don't know of any other programmes. With the kids we only see them in 2 or 3 hours, it's such a short time to change the kid's life but we can't get around that. But for the time we've got, if you do it well, you can achieve something.

> FAIP, because it's there, it's effective, it's private and confidential, and it works. The gratitude of parents/caregivers is evidence in itself that there is 'someone' out there who cares enough to take the time out to help their child and the family as a whole.

Factors that contribute to successful outcomes

Responses were analysed in relation to specific questions in the surveys, such as, what do you perceive the programmes key characteristics to be, and from comments made elsewhere to produce themes. In total nine themes were distinguished.

Delivery of the programme by experienced firefighters in uniform is a key element of the programmes' success

Most participants reported that delivery of the FAIP by experienced firefighters in uniform contributed to the success of the programme. Many participants reported that firefighters were respected by the public and viewed as role models within the community. Wearing the NZFS uniform enabled them to be identified as firefighters and thus had a positive impact on the establishment of rapport with clients and effective delivery of the programme:

> The actual delivery of the programme and a firefighter in uniform, together they are effective. The NZFS is the most respected uniformed profession in the country, well respected. An officer in uniform delivering the programme sets professionalism to the programme, its effective and it works.

However, some participants reported it was not always appropriate to visit clients in a NZFS uniform and vehicle because of the blame and stigmatisation that could be placed on the clients by their community. One participant reported that the number of referrals to the programme from rural areas decreased when uniformed Practitioners in NZFS vehicles delivered the intervention and increased again once unmarked vehicles were used by Officers out of uniform:

> If a fire occurs in a small rural area, the bush telegraph works. They see the NZFS vehicle at a house where there has been a fire in the area and they blame the family.

Most participants also reported that experience of fighting fires was central to establishing credibility with clients. These participants reported that their experience enabled them to share their own stories about the consequences of unsafe fire behaviour and provide education about fire science from a position of authority that clients accepted:

> I've been in the fire brigade for a long time. Whatever fire they've lit I've probably been to one or two similar ones and I can tell them the consequences from my experience.

Carrying out the programme in the fire lighters home is effective

The FAIP is typically carried out in the fire lighters home. Many participants identified that by carrying out the intervention in the fire lighters own environment they were more comfortable and perceived the Practitioners as non-threatening: "The programme is taken in the home rather than an office. We are therefore reaching out to them and the offenders feel comfortable in their own environment", and "The programme undertaken in Client's home, it is non institutional and non- threatening".

An added benefit reported by some was the insight gained into the life of the fire lighter, which could elucidate some causal factors for their fire lighting behaviour: “It needs to be in the home to get more of an insight into underlying causes to the fire lighting behaviour”. Moreover, it facilitated the fire risk assessment of the home, which contributed to an increased level of fire safety for the client and caregivers (e.g., installation of smoke detectors).

The approach of the Practitioners facilitates rapport building with the client and caregivers

Many participants noted that Practitioners were dedicated to caring for young people and were able to communicate with them and their caregivers in a non-threatening and genuinely interested manner: “Lay firefighters deliver the programme. Firefighters are very down to earth and set reasonably easy targets that are attainable. We do not judge an individual for their wrong doing but assist and support them in making things right”.

They reported that the non-judgemental and empathetic approach of the Practitioners in delivering the programme and the assurance of confidentiality facilitated the building of rapport with the client and caregivers, where clients felt supported in following the programme: “Delivered by a firefighter in a positive, non-threatening way. Parent and young person quickly become at ease, and hopefully 'buy in' to what is being shown to them”.

Many participants noted that intervention initiatives, practitioners and caregivers who presented themselves in a threatening way and provided punishment-oriented interventions were not useful because they did not facilitate rapport or educate about fire safety: “Often children have continued to light fires because they have been punished rather than educated about the consequences”.

Caregiver support is essential

Many participants reported that although the programme is voluntary, in the sense that consent must be obtained for the programme to be delivered, many fire lighters are directed to take part by authority figures or their caregivers. This means that the intervention can be delivered regardless of how the young person feels as long as the caregivers consent: “The kids have no internal motivation, its all the parents or outside organisations telling them what to do”, and “Family consent is more important than the clients because if the family say it’s okay for you to be there you do the intervention with the child regardless of whether the child wants to do it”.

Some participants reported that the young people can become motivated during the intervention, possibly due to the comfort derived from the intervention being delivered in their home environment, the realisation they are not going to be punished, and the rapport established with the Practitioner: "The desire to understand the unknown, inquisitive, occasionally there is a bond (Fire Fighter role model) between the client and the practitioner".

Most participants noted that caregiver support for the programme being delivered to the young person was essential for its effective delivery and long-term success: "Parents are the constant factor and their reaction and involvement will make the difference". The FAIP relies on the caregivers support to reinforce the programme material on a daily basis, so that long-term behaviour change occurs: "Good parent support, without it the programme is less successful, it relies on client doing a little homework each night to reinforce the lessons learnt from 1st session". Pinsonneault, Richardson and Pinsonneault (2002) argue that caregiver involvement is a key characteristic of effective intervention programmes involving fire safety skills education.

However, some participants identified that too much interference during the delivery of the intervention was not helpful for the fire lighters learning, for example, answering the questions for them: "Parents answering questions, giving the 'right' answers because it reflects on them".

Some participants also noted that caregivers having told the young people that the fire service was coming to punish them did not assist with the necessary development of rapport. Participants identified other behaviours by caregivers that were not conducive to the successful delivery and long-term success of the programme. These included lack of cooperation (e.g., not being home for the appointment), parental use of alcohol and drugs, poor supervision of the young person, and a chaotic home environment. Lax or inconsistent parental supervision, family conflict and limited family organisation have been linked to recidivism of fire setting (Kolko & Kazdin, 1992).

Education and home safety assessment empowers the client

Most participants reported that the home safety assessment and education components of the programme highlighted the consequences of fire, from the loss of material possessions to the loss of life: "Let the kids know that what they're doing has serious consequences and to stop them doing it again by raising their awareness". Participants noted that many young people did not previously have an understanding of fire science and had never considered what the consequences of their fire lighting behaviour could be. Therefore, this knowledge empowered them to make informed choices about fire lighting in the future and in

some cases to take more responsibility for fire safety within their homes: “It enlightens the client of the dangers of fire and of the speed and damage it can do to property and humans”, and “Empowers clients with knowledge of fire. Its speed and potential to cause serious damage to people and property and other wide sweeping consequences of fire lighting and setting”.

Early detection and the ability to refer to community services contributes to the effectiveness of the programme

Many participants identified that early detection of those clients that require treatment services or community resources, and the ability to refer on, contributed towards positive outcomes for the client and was appreciated by them. Most participants reported that external professionals (e.g., Psychologists) had an important role to play in ensuring the safe and effective delivery of the programme, by providing an avenue for referral and services to the client; and consultancy for the Practitioners regarding client issues.

> We should have easy access to people with more skills than us. It is important that we make sure that stays open and that we can recognise when we are getting out of our depth and refer on.

> A young lad in a solo parent Pakeha family - no Dad - was up to mischief. He got though the programme okay, he took charge of fire safety in the house, etc. But there was something missing. In the review of the session, having no Dad on hand was the big issue. Practitioners are encouraged to network widely with other agencies and while not the Big Brother/Big Sister programme per se a local Maori organisation had something that fitted the situation and Mum was put in touch. And the young lad had his own special person on the sideline of the soccer pitch.

Current resources are effective

Most participants reported that they found the current resources effective and of a high standard, for example, the photographs and DVDs provided visual evidence of the possible consequences of fire and the workbooks reinforced learning about safe fire practices. Participants noted that they were well written and suitable for a range of age groups: “The reading and work books, they are really well written and packaged for various age groups”, and “The DVDs shows burns and fire spread, and they seem to be easy for the clients to digest”.

Most participants identified that the ability to choose the resources they would use according to the clients needs was an important and effective aspect of the programme: “Generally good resources and procedure, is able to be varied a lot to suit the individuals”.

Tailoring the programme to meet the needs of individuals is necessary

Many participants noted that the flexible nature of the programme curricula and resources enabled them to tailor the programme to suit the individual needs of their clients and work "one on one" with them: "Being able to quickly pick up the best teaching style that will suit the individual. Being able to point out what their actions can do and the impact on others by teaching means that suit that individual".

Flexibility in putting together intervention packages is important so that factors that could impact on the fire lighters ability to learn are considered and the unique factors contributing to the fire lighting behaviour are addressed (Pinsonneault, 2002b).

Current training is useful

Many participants reported that they found all of their training useful and that it instilled them with the confidence to deliver the intervention: "Initial training is all good: how the programme works, work books, what's in the tool bag…I keep it updated".

These participants identified the following aspects of their training as particularly useful: peer observation, peer networking and support, case studies and role-plays: "Observing an intervention being conducted by a more experienced practitioner [is useful]".

Most participants identified that training in psychological and social issues was useful in helping them more effectively deliver the FAIP. Some participants noted that learning about the triggers and motivations for fire lighting behaviour assisted them in determining how to deliver the programme, including what resources to use and whether a referral might be appropriate:

> Identifying what triggers young people's minds to go against the norm of society. This, in turn, leads me to understand what "levers" need to be pulled to turn an offender around.

Many participants reported that training in interviewing, including communication and listening skills was useful in assisting them to more effectively deliver the FAIP. These skills assisted them in developing rapport with their clients, effectively communicating with people from different cultures and "reading between the lines" with fire lighters and caregivers: "Understanding that children come from many varied backgrounds and living conditions and what may be a norm for our family, is way outside the understanding of theirs".

Barriers to programme effectiveness and suggests for improvement

Responses were analysed in relation to specific questions in the surveys, such as, 'what programme factors contribute to poorer outcomes', and from comments made elsewhere to produce themes about barriers and improvements. In total, ten themes were distinguished.

The NZFS and staff do not adequately recognise FAIP efforts

Some participants reported that funding and full-time staff for the FAIP has sometimes been difficult to achieve: "It is an excellent programme and very under-rated (or perhaps just 'ignored') by internal management and not given the support and backing it deserves".

The primary source of funding for FAIP has been from the NZFS. Some participants reported that funding the overtime rates for children to be seen outside of school hours has been difficult. During its early years, fundraising was undertaken to meet the cost of resources (e.g., smoke alarms). At one stage, the insurance company IAG had sponsored FAIP scholarships to promote the development of the programme. However, this is no longer available. Some participants also noted that while they had good peer support with FAIP, they were not viewed positively by other NZFS staff because their role entailed working with young people, or they did not understand the role of the FAIP:

> The programme is not fully understood by all Fire Service staff yet. However, this situation is rapidly changing. How this factor contributes is that not all officers are promoting the programme at the time of the fire and kids miss out.

> There is peer support in FAIP but not in the general service - mocking attitude, 'little boys playing'.

Some participants reported that the programme would benefit from full-time regional co-ordinators by providing better-focused internal management of the programme and the time required to establish and maintain stakeholder networks: "Lack of full time co-ordinators, lack of continuity, lack of co-ordinators available for clients and practitioners; lack of constant networking with referral partners".

There are problems with collaboration with stakeholders

Some participants reported that collaboration with stakeholders was important for the identification of people who have been lighting fires, supervision for the Practitioners delivering the FAIP to ensure professional safety, and for meeting the complex needs of many of the clients: "We need to get better linkage with primary health organisations and understand how they influence the delivery of psychosocial services".

Communication between organisations was viewed as essential by many participants for the development of collaborative relationships: “Communication and understanding of what each party is offering”. The level of communication should include the function of their various organisations and roles within those organisations, organisation priorities and expectations of each other: “You must present what you are going to do to them, to dispel preconceptions about what you are going to do”.

In addition, information sharing, including expertise and active discussion was viewed by many as the key to “true partnerships”. One participant suggested that regular meetings with stakeholders could provide a forum for communication and information sharing: “We could have an advisory group on a semi-annual basis that will have formal terms of reference, where stakeholders are represented in the group”.

One participant identified that formal agreements between organisations would clarify processes and reduce the reliance on individual relationships. However, some participants who commented on stakeholder relationships considered it crucial for the effectiveness of any service agreements that all operational staff at the various services were aware of the agreements, the parameters of them and were committed to them:

> There is a lack of formal or informal agreement between the NZFS and mental health services. There needs to be agreement between shop floors rather than Headquarters e.g., memorandum of understanding. The agreements need to permeate all members of staff so they all know what the agreement is and are on board with it.

Referrals to the FAIP are not occurring as often as they should

Some participants reported that stakeholders should refer people who deliberately light fires to FAIP because they are the specialists: “We are the experts, so if they have a client with a fire bent then they should involve firefighters to give advice on how to best provide information on fire”.

Some participants noted that stakeholders might not be referring the full extent of those who deliberately light fires. One participant stated that some stakeholders might not refer because they believe it might reflect poorly on them: “Some Principals, I believe, see it reflects negatively on their school if one of their pupils has fire lighting behaviours”. To circumvent this occurring one participant suggested that the referral process “should be embedded in schools with the worst area statistics”.

Many participants reported that improvements to referrals would occur if public education and awareness of the FAIP could be broadened. Participants suggested running education groups about how referrals can be made to FAIP and working more closely with the schools: “The programme needs to be expanded to firstly

make other groups and the community at large more aware that it is available and what it involves". A recent report from the USA also found that increased public awareness and acknowledgement of deliberate fire lighting as a serious problem was necessary to facilitate improved prevention services and appropriate referrals (National Association of State Fire Marshals, 2000).

The ability to refer on to community services, or the slow process of referring to community services, is problematic

Many participants reported that at times, when they tried to refer their clients on to other services the referrals were either slow to be accepted or were not accepted at all. Some of the reasons cited for this included, referrals being overlooked, services being "over-stretched", service policy regarding acceptable sources of referrals, and staff changes affecting networks between services.

> I had to deal with a boy who had suffered a head injury. It was obvious he was outside my field of expertise. I wrote to the clinic that was dealing with the problems that arose from the head injury, however, they chose to ignore it.

> Lack of other service follow up – referred on to other services and not picked up or evasive about taking it up. For example, mental health agencies are not picking up referrals, they have to go via the GPs.

Suggested solutions included, from many participants, that clients getting timely assistance could be facilitated by improved communication between referral sources and referral recipients and by established referral pathways.

Lack of communication was found to be a key barrier to service interaction and appropriate intervention in a recent report looking at the strengths and weaknesses of four fire service based programmes in the USA (National Association of State Fire Marshals, 2000). Standard operating procedures and co-ordinated tools (e.g., evaluation forms) and systematic sharing of data were two solutions offered by this report (National Association of State Fire Marshals). Some participants suggested that more knowledge of the services that each potential referral recipient provided and when to refer FAIP clients to them could clarify the referral process to community services:

> With a better understanding of what and how they can help people that we work with will allow us to refer individuals to them if need be. Currently there is very little knowledge of what ways you can help.

One participant suggested a discussion group amongst the FAIP staff. Some participants suggested a resource listing of all possible referral services, including Māori services:

> A list of academics for all Practitioners, for when a client is at a dead end, fallen through the cracks of the education system and fire setting is motivated by lack of purpose in life. So we can refer them to a service that can deal with these needs.

> It would be useful if the practitioners had in their tool kit a directory of Māori service providers for referral onto these providers in the community. Practitioners could have this on them so it's on hand to refer to when they are with the families.

Further training and support is needed

One participant commented that Practitioners could be at risk carrying out the programme on their own, given the sometimes "high-risk" nature of the FAIP clients, while another noted that it would be useful to have the observations of a second practitioner: "Often staff carry out the Fire Awareness Intervention Program as individuals this could be putting us at risk given often the very high risk group that we deal with". The FAIP programme recommends conducting the intervention in pairs, particularly with high-risk multi-problem young people where the potential dangers are greater, although this is not always practical due to resource availability.

Many participants noted that ongoing monitoring and training was essential and suggested regular "refresher" courses or a course that advanced on the induction course:

> We're mentored out to experienced practitioners, so the trainees tend to follow the methods of their mentors. Therefore, shadowing of a few different people would be useful so you can pick and choose the skills and styles to take on and use.

> We all work very hard to work with all individuals it is a very difficult role to carry out on going training and monitoring is essential.

Some participants noted that learning about the impact of medical conditions, psychiatric disorders (e.g., ADHD) and the psychosocial background of the client assists them to understand their clients' fire lighting behaviour better and thus how to best help them. One participant reported that learning about the cognitive style of traumatised children made them aware of how their communication style might be interpreted by these children and how best to approach them:

> Understanding that children come from many varied backgrounds/living conditions and what may be a norm for our family, is way outside the understanding of theirs.

Most participants reported that they would find further psychological training useful. Specific areas they would reportedly find useful include, characteristics of fire setters and their families, how to identify young people with psychological issues, crisis management, and techniques for working with traumatised or oppositional young people. Typical comments included: "To have a better understanding of people in general and of crisis situations", and "More advanced training with difficult children who are not listening to any one or may be at risk of self-harm".

Many participants suggested further training in interviewing skills, including how best to communicate with young people experiencing concentration difficulties or behavioural problems. Typical comments included: "constant refresher training that looks at interpersonal skills, communications, interviewing, and dealing with children with concentration and behavioural issues".

A mixed perception regarding the availability of cultural supervision for the FAIP

Some participants said there was no, or very little, Māori cultural supervision available for the FAIP Practitioners, while others reported that cultural supervision was available from the Iwi Liaison Officers who could be accessed directly or via the Regional Co-ordinators. The need for supervision consisted of support and advice with Māori clients before, during or after the programme delivery. Some participants reported seeking the advice of their peers who identified with the cultural group (e.g., Māori) of the clients they had questions about or needed advice about. One participant noted this type of supervision was not fair on the person providing it and potentially unsafe because that person may not have the requisite skills. Some participants suggested that a nationwide protocol regarding cultural supervision needs to be established, with a clear pathway for Practitioners to follow in order to get the assistance they need in a timely and safe manner.

A different view was expressed by some participants who reported the FAIP already addressed cultural difference, primarily by the universally respectful attitude of the Practitioners: "I believe cultural services are covered in the programme", and "The caregivers are asked if there is any special customs or practices that we need to observe before working the client".

Some other participants reported that cultural differences are not relevant to the delivery of the FAIP. They argued that fire lighting behaviour and the goal of assisting people to stop lighting fires transcended culture

and to alter current practice based on cultural difference would not be helpful for the client, their caregivers or the programme:

> Based on the number of fatal fires I've attended, "dead" is the compartment. All the cultural and ethnic issues just don't matter anymore. Let's keep it simple and enjoy and help each other while we're all in the "alive" compartment.

> As long as the person delivering the programme is culturally sensitive there is no problem. The issues are the same for all cultures, if there is a problem it would come from prejudice not the education programme.

Solutions for those who perceived culture to represent a significant issue included matching clients and practitioners whenever possible. The main barrier to this idea was the limited number of Practitioners from minority cultures (e.g., Māori, Tongan, and Samoan): “We have made overtures to Maori-speaking Maori Fire Fighters and we will keep trying to bring them on board”. Some participants noted that the FAIP strove “to have a diverse range of cultures reflected in [their] practitioners” but matching was still not always possible.

Another barrier identified was the lack of Practitioners who could speak minority languages. One participant noted that clients were not generally asked if they would prefer a Practitioner who could speak their native language because the FAIP could rarely provide them with that service:

> Clients are never asked if they want a practitioner that speaks te reo because there are none in my region and we can’t identify a need for them unless we ask people if they’d prefer a practitioner that speaks te reo, to collect the stats on it.

Some participants identified that they could access language interpreters when matching for language among Practitioners was not possible.

Another solution or improvement in this area was asserted by some participants to be the development of the cultural awareness of the Practitioners for the safe and effective delivery of the FAIP (e.g., to assist with rapport building) and out of respect for their clients: “All cultural awareness is a must. If we do not respect their values, they will put a barrier between them and us”.

Some participants noted that more cultural awareness training would be beneficial:

> The FAIP practitioners all come across Māori families. To have a good service we need practitioners to understand Māori culture, to have training regarding body language, customs and traditions. So the clients open up to us more and to ensure barriers are not put up by cultural insensitivity. We

> need robust cultural training. We need to look at what the job entails (i.e., interacting with Māori clients and their families). We need to learn Māori ideology, the way Māori think, customs, and at the home level, observing protocols (e.g., Karakia before starting). So the FAIP practitioners will know what to do in those circumstances.

Specifically, Maori, Polynesian and Asian cultures were identified as targets for further training: "Do some training in Polynesian and Asian cultures, a field day".

The Screening Profile Interview questionnaire needs updating

Many participants reported that the questionnaire takes too long to complete and they would prefer fewer items and more useful questions: "it causes a lot of problems for new practitioners; it's too involved so they spend too much time on doing it rather than intervention".

One participant reported that some items on the current questionnaire are not being asked by the Practitioners because they do not understand the relevance of them. Understanding the questions an interviewer is asking is important for the overall analysis of the information obtained from the interview (Zipper, 2002): "A better interview sheet that is not quite so direct but will better help us understand the individuals problems and needs so they can be referred to the correct agency".

Another participant noted that the phrasing of some of the questions may not be culturally sensitive and suggested consideration of culture in any future review (e.g., to take into account the Māori concept of whangi): "Questions would need to phrased to suit Māori clientele. Some questions currently on the questionnaire may not be viewed enthusiastically by some Māori families (e.g., the one about who you're living with)".

Another participant also noted the software available to analyse the questionnaire data was "not user friendly". Other participants who were unclear about current use of the data collected supported this view: "No-one 'seems' to do anything with the data nationally; there is no cross referencing of data, mapping or patterns"

There are ways the interventions can be improved

Suggestions for improving the fire risk assessment and education of the FAIP included a "fuller homesafe checklist", visiting a fire where substantial damage has occurred, and creating an education package specifically for the caregivers to supplement what is delivered to the fire lighter in the caregivers' presence.

One participant suggested including a visit to a fire station. Some other participants however, reported that visits to a fire station or tangible items such as NZFS lunch boxes would be considered rewards for inappropriate behaviour:

> We do not use resources as in lunch boxes, drink bottles and other tangible rewards. As it would be detrimental to be seen by other siblings, the offender being 'rewarded' for fireplay/fire setting and may cause animosity or copycat behaviour by siblings.

Resources need updating

Many participants suggested updating the current resources. Their suggestions included a workbook for older age groups and generally a wider range of resources for different age groups; updated DVDs, including one depicting a house fire; and an interactive computer game teaching fire safety.

> We do have DVDs with controlled house fires with a scientist. But it would be good to have houses lit from arson and shows the consequences (i.e., more realistic), including interviews with family and other people from each fire to show the impact.

> More age and incident appropriate DVD's. To have material that client can better relate to, seems to put them at ease watching a DVD, but they can relate to what is being seen, as a practitioner you can pause the DVD when appropriate and discuss and compare what is happening. Young person can give their view of what is going on in the DVD, even what they thing the 'actors' are thinking or feeling.

> An interactive CD ROM game would be good. Most kids are very techno 'savvy', and this is how they learn.

Development of resources included, for some participants, increasing the Māori design elements of the workbooks to make them visually culturally appropriate and ensure that these are consistently culturally appropriate. But not necessarily creating more resources in te reo Māori because the potential demand for them is unclear: "Look at the statistics around the use of Māori speaking practitioners or clients that utilise Māori resources, if there is a demand for them then look at having bilingual or resources in te reo Māori".

Follow-up of clients is inadequate

Some participants suggested extending the follow-up period to six months or a year after the programme has been completed to combat repeat fire lighting behaviour.

I would like to have more follow-up with the kids. Some may need a check up now and again. There are 1st and 2nd visit forms but no more forms after that. I'm not sure we can't do it? How far into their lives can we go? We've only got a couple of hours in their lives. Everyone goes into their lives for a minute, but how useful is this in the long term.

Services offering education based programmes in Australia, Canada, USA and UK

This section of the report reviews participant responses from twenty-five services that offered education based prevention programmes to people who had deliberately lit fires. Fire services and health care organisations operated these programmes.

Description of programme characteristics

Goals of the programmes

All participants reported that their programmes had the goal of reducing the number of deliberately lit fires and the dangerous consequences associated with them, such as loss of life and injury. Many participants also reported the goal of educating their clients about fire safety and the consequences of unsafe fire practice in order to change their behaviour. Two of the participants also identified a goal of connecting their clients with appropriate community resources.

Clients of the programmes

Typically, the clients of the programmes were young people up to 18 years old. Some participants also delivered their programme(s) to people 18 years old and over with an intellectual disability. The clients were predominantly male, with low socioeconomic status and often with learning difficulties. Fire lighters were typically referred to the programmes by their caregivers, schools, child and mental health services and law enforcement or the courts.

Implementation of the programmes

Fire service personnel with an interest in working with young people and deliberate fire lighting initiated most programmes. Some programmes were also developed through collaboration between fire service personnel and mental health professionals or other stakeholders (e.g., justice department). Considerable variation existed in the length of time since implementation, with a range of 8 months to 25 years.

Many of the participants reported that the impetus for the development of the programmes was the number of referrals received, primarily from caregivers and schools:

> The programme got started due to parents coming to the fire station for advice when they caught their children playing with fire. Our initial efforts were hit and miss at best. Therefore, we tried to get some sort of uniformity by seeing what other departments have available and borrowing and adjusting their ideas to our department's needs.

Some of the participants reported that their programmes were developed in response to the success of programmes for deliberately fire lighting in other locations:

> I came from another fire department where I had started a programme and suggested that we start one here. Our Fire Chief was supportive of the idea and encouraged me to follow through. I personally developed procedures and forms. The school district began referring many students several years ago and those children now represent the majority of the ones I see.

Some noted that their programmes were developed after an increasing number of deliberate fires were identified as being lit by young people. Some participants also reported that concern regarding the number of young people with serious burns from fire lit by young people motivated programme development. Many participants reported that that they referred to existing programmes for ideas while they were developing their own.

Intervention services

Most participants reported that they conducted an initial risk assessment, used a screening form or questionnaire with the fire lighter and their caregivers prior to or during the first session. These forms typically included a confidentiality agreement and included relevant details, such as previous history of fire lighting and family situation. The purpose of these instruments was to provide some background about the clients to assist practitioners in planning an appropriate intervention and to indicate if referral to other services were appropriate.

Most of the participants reported having a fire safety component in their intervention. Some participants noted that they conducted home safety assessments of the clients home (e.g., checking smoke detectors) and other participants focused on fire prevention and fire safety (e.g., “stop, drop, cover and roll”, fire escape plans). Most participants also reported educating the fire lighter about the dangerous consequences of unsafe fire use (e.g., injury and property damage) and some participants included a fire science component (e.g., how fire travels, speed of fire travel). One participant reported providing a tour of a goal for some fire lighters. Another participant reported including discussion about peer pressure as part of their intervention. Most participants reported using resources (e.g., DVDs and workbooks), activities (e.g., assigning the client

as a "fire officer" to monitor the new fire safety procedures in the house) and rewards to reinforce their message. The visits took place over one week to six months. The number of sessions with the clients varied between one and five visits, with more scheduled if follow-up contact revealed continued fire lighting behaviour and each session was from one to two hours. Typically, those participants that provided more sessions were shorter in length (i.e., one hour rather than two). One participant noted that:

> I feel that sometimes it would be better if we were allowed more visits to the clients. At the moment we are allocated one visit for the Interview and 2 visits after that. If necessary, we can have more but we need to explain why and I think it is not necessary.

Most participants reported conducting a follow-up with their clients to check out if there had been fire lighting behaviour since the intervention. The reported follow-up period was variable between the services. Follow-up ranged from two weeks post-intervention to 24-months. One participant reported sending birthday cards to the fire lighters for two years post-intervention, to assure them of the practitioners' continued interest in them. Most participants reported that their clients were followed up at least twice following the intervention and most had a programme policy regarding when to follow-up. One participant reported that they had "occasional contact" with the caregivers post-intervention but it was "not consistent". The follow up was typically conducted over the telephone. One participant reported that they were in the process of organising an independent organisation to ring the caregivers because "we found parents were answering what we wanted to hear". Some participants reported sending letters to the caregivers, although one participant reported that this practise was not ideal: "we live in such a transient place we receive most if not all of these back as the clients have moved and have not left a forwarding address".

Current resources

Most of the participants reported using resources to supplement the verbal components of their programmes. These resources typically included DVDs/Videos, workbooks, storybooks, star charts or other reward based charts, smoke detectors, educational information, games and some participants used photographs of property damage and photographs of people with burn injuries or people who had died from a fire. One participant reported that burn victims also spoke with their clients.

Staff of the programmes

Many of the services had a central group, such as a steering committee, guided their programmes on a policy level while coordinators oversaw the daily operation of the programme(s). Practitioners who delivered

the programme(s) ranged from one person to more than 68 with a mix of full-time, part-time and volunteer practitioners. Additionally, some programmes reported Consultant Psychologists or Psychiatrists were attached to their services.

Staff training

Most participants reported providing some form of initial training for their practitioners of between three and six days. This included communication and interviewing, delivering the intervention and psychosocial information relevant to the fire lighters: "Initial training consists of communication skills that are relevant for dealing with not just the young person but the family as a whole, child protection ...fire setting characteristics".

In addition, practitioners attended relevant conferences and seminars conducted by stakeholder organisations. Some Services in USA provided short initial training (e.g., one day), seminars and conferences: "Nearly all of the current training is through attendance at local conferences or occasional 1-2 day training sessions...updates come through newsletters and websites provided by juvenile firesetter oriented organizations".

In contrast, other services in USA facilitated certified training for their practitioners, typically the NFPA 1035 Juvenile Firesetter Intervention Specialist training provided by the National Fire Academy. Some participants reported mentoring, where new practitioners spent time observing more experienced practitioners deliver the intervention: "We usually assign an experienced practitioner to a new practitioner until that person feels he/she is capable of dealing with clients". One participant also noted regular meetings with practitioners and consultant professionals where cases were discussed, role-plays were practiced and expert advice was provided. These reported meetings were reportedly supportive and provided assistance for them in their work: "I find that the other practitioners come up with the same problems I face and it's useful to listen in and find ways to resolve problems".

Stakeholders

Stakeholders of the programmes were identified as the public, schools, social services, health services, law enforcement and justice services, housing services, environmental organisations and the fire services.

Location of programmes

Typically, in Australia and UK, programmes were operated state-wide or county-wide respectively and co-ordinated from a central point within each area. In USA location of programmes were more variable, with some state or countywide programmes and others that only served the city in which they were based.

Location of programme delivery

Many of services delivered their programmes in the home of the fire lighter and caregivers. These services were typically from Australia and UK. Many participants reported that conducting the intervention in their clients' homes assisted in the development of rapport because the clients felt secure in their own environment: "In the child/young person's home, rapport building is aided by the child/young person being in a place where they feel secure", and "Previously home visits were optional. We found an expectation from many clients that we would visit them. Home visits have been mandatory since last year, and have been very successful in helping change the situation".

Additionally, it allowed the practitioners to ensure that the home was fire safe: "Delivery in the home allows access to ensure home safety is in place and also allows staff to attempt to engage the parents". One participant from the USA reported that the intervention was started in the home and once rapport was established it moved into an office setting.

Many services, typically from USA and UK, delivered their programme(s) outside of the home. One participant reported conducting the intervention at the fire lighters school if their home environment was not suitable (e.g., too many people in the home). Some utilised justice facility or a fire station for young people who were referred by the courts. Most of these participants who delivered their programme(s) outside of the home reported using service offices (e.g., at a fire station or hospital).

Some of these participants reported that the office environment was not always ideal for delivering the programme. This was mainly due to the availability of appropriate rooms for the fire lighter and caregivers and other family members who might also attend (e.g., other children), supervision for these people and space within the office to accommodate them. Some participants noted that their offices provided privacy and comfort, particularly if they were purpose built for the programmes needs. Some participants also noted that it might be easier for clients to attend local fire stations rather than travel to the practitioner's office.

Measures of success

Most participants measured the success of their programmes by the number of fire lighters that went on to light more fires within a pre-determined period of time after completion of the programme (i.e., recidivism). The pre-determined time period varied from three to 12 months and typically corresponded to the programmes' follow-up. During the follow-up call(s) the clients were asked if there had been any more incidents of fire lighting. Additionally, if any fire lighters were re-referred to the programme within the predetermined period they were counted as recidivist fire lighters.

Other indicators of success for some programmes included a reduction in deliberately lit fires within their area, increased support from their service and positive feedback from the clients and parents/caregivers about the programme. Some services routinely incorporated an informal evaluation of the programme into the follow-up procedure, asking parents/caregivers about the effectiveness of the programme. Some services had undergone formal evaluations and in contrast, some participants reported that they did not currently have an evaluation process in place for their programme.

Outcome

Most of the participants reported a successful outcome for their programmes. The participants reported a recidivism rate between 1% and 21%, and if only those services with informal methods of evaluation are considered, the range is between 1% and 10%. Some participants also reported an increase in referrals and a reduction in deliberate fires in their area. Two participants reported that they did not have any data available on which to judge the success of their programmes.

> We have a first, second and fourth grade program fire safety program that I believe keeps our numbers of fire, injuries, and deaths at a minimum. The programme appears to be making a difference in the lives of those that attend because we are not seeing their names in other fire situations, thus far.

Factors that contribute to successful outcomes

Seven themes were identified, most of which were held in common across countries.

Delivery of the programme by experienced firefighters in uniform increases impact

Many participants reported that the programme practitioners were perceived as credible sources of information because they were experienced firefighters in uniform:

> I think that our uniform adds lots of credibility. The clients know as soon as they see us that we know what fires are about. I have been in the fire brigade for 18 years and I can relate to the clients when we discuss fires. They will often open up to us when they realise that we know what they are doing and what the results of their actions will be. It is difficult to describe but there is an understanding between fire setters and firefighters.

They reported that the fire service uniform is recognisable and symbolises the experience they have with fire:

> I believe the clients respond well to our program because they get to engage with a real firefighter in uniform. The firefighters can explain to the clients about the dangers associated with fire lighting because they have first hand experience and the clients know this.

The firefighters are able to talk with the fire lighters from their own experience and can understand the language used in regards to fire, which fosters respect by the fire lighters and assists in the development of rapport.

Promoting a positive perception of the fire service staff is important

Some participants reported that the perception of fire services as a caring organisation rather than punitive assisted them in developing rapport with their clients: “Firefighters are not seen as authoritarian but as helpful caring individuals who provide this service on a voluntary basis to assist the community”. They reported that a combination of being non-judgemental and an empathetic approach, along with spending time with the fire lighter and listening to them, contributed to the success of the programme: “I find that if I go in there with an open mind and listen to the client and parents it usually works out well and it all falls in place”. Many participants reported that good communication skills in their practitioners were essential, including listening skills and the “ability to interact with people from a wide range of backgrounds”, and “Strong interpersonal skills is most important in our work. The families must like you, or at least respect you, for them to follow along with the education and recommendations”.

Other characteristics deemed important included, dedication to the programme and working with young people, patience, and a caring attitude. They reported that punitive organisations or communicating with the clients in a threatening manner or "lecturing" them was not useful.

Education about the dangerous consequences of lighting fires is a key element of the programmes

Many participants reported that educating the fire lighters about the dangerous consequences of unsafe fire use was a key element of their programme. These participants noted that many fire lighters had not thought about the possible consequences of their actions might be or had not fully understood them prior to the intervention. Some also noted that learning about the fire science (e.g., the speed that fire travels) helped the fire lighters to understand that they cannot necessarily control the fires they start:

> I think showing the participant the power and speed of fire (via videos) helps a lot of our participants realise they can't control fire. Most of our participants (and most people in general) have no idea what a real house fire is like and think that they can control fire. I also think our homework surprises many of our participants when they see how many people are affected by their playing with fire.

However, one participant noted that sometimes the fire science aspect of the intervention could get too technical for the fire lighters to comprehend and another participant reported that that they thought "the fire science part of our programme is the least effective and sometimes I feel like it is more of a 'how to' rather than preventative". In contrast, some participants reported that the knowledge about fire and its consequences often fostered self-esteem within their young clients and promoted a sense of personal responsibility that was lacking prior to the intervention: "A new found ability to understand fire, to understand his own ability and to give him a sense of purpose and achievement".

Flexibility in how programme is delivered is a key element

Many participants reported that their programmes were flexible in the sense that they could be tailored to suit the individual needs, learning ability and age of each fire lighter. Typically, the initial assessment or interview with the fire lighter and their caregivers provided the practitioners with information they could use to ensure they delivered an appropriate and relevant intervention that would work best with that fire lighter:

> No one thing is a universal panacea, the mix of materials used is a result of the initial interview and an assessment of what would work best with the individual. The mix is often changed during the programme, as reaction or comprehension is determined (i.e., back off to simpler examples if client is having difficulty taking in the information, or move up to materials usually used for an older age group, if the client is not being sufficiently 'challenged').

Many participants reported that they delivered the programme to one client at a time and that the personal attention facilitated the establishment of rapport and their learning: “The one-on-one visits to the child allowed me to build up a rapport and trust with the child”.

Caregiver support of the programme is important for its success

Many of the participants reported that caregiver support and involvement in the programme was crucial to produce positive change in the fire lighter. Some participants reported that the caregivers influenced how receptive the fire lighter was to the programme and were essential for the new learning from the programme to be reinforced after it had been delivered: “Parental involvement, keep weekly message going, involve them in homework assignments”. Some of the programmes reported that they focused on caregiver change and worked directly with them to achieve this.

Many of the participants reported that a lack of caregiver support could negatively impact the effectiveness of the programme, including lack of interest and participation in the programme, a chaotic home environment, and inappropriate use of rewards and punishment (e.g., withholding a star for a non-fire related offence). Typical comments included:

> There is a problem with referrals when families are forced to undertake the programme and they are not interested in fixing the problem of fire setting and are just attending the programme because they have been made too. In these situations there is clearly a lack family support.

Use of audio-visual resources is most effective

Some participants reported that they found the DVDs/Videos to be the most effective resources because they held the attention of the young people and they could better relate to what they were seeing. Some participants also reported that DVDs and photographs were the most effective because they provided tangible evidence of the potential consequences of fire:

> Video/DVDs can show tangible evidence to the client, hands on approach children interact better.

> The most effective I have found is the book of scene photos (after events have happened), it gives the child a chance to look at what has happened from other children of the same age and doing that same activities.

One participant reported that the workbooks were useful because they “provide information the client can keep” and another participant noted that reward charts assisted children to abstain from fire lighting because

they could see themselves working towards their goal: “We find that young children will stick to the model especially if they can see the stars filling up the chart”. Some participants suggested that non-verbal rewards were not always appropriate or effective in reinforcing behaviour change while another participant noted that they would benefit from a better reward systems and resource material for adolescents:

> Reduction of the amount of 'promotional items' given to child/young person. Rewards are only given for positive changes to behaviour; often the firefighters time and attention is reward enough without 'buying' or 'bribing' the child which often results in short term change.

Some participants reported that photographs or other visual images of people who had been injured by fire or fire fatalities was not appropriate to use with young people as it scared and traumatised them. One participant pointed out that it was not always possible to use DVDs/Videos because some caregivers did not have the equipment to play them. In this case, the availability of workbooks and other resources were important. One participant noted that the age appropriateness of the resources determined their effectiveness more so than the actual resource: “Using materials/resources for the wrong age groups, children can become confused and receive the wrong messages, trying to preach to teenagers only alienates them, too much theory becomes boring”.

Networking with stakeholders facilitates a better service for the client

Most participants reported that they considered networking with stakeholders important to the success of their programmes. Stakeholders could provide collateral history on their clients, including possible motivation for the fire lighting and insight into the systemic factors that could be contributing to the behaviour. Strong networks between stakeholders could facilitate prompt referrals, rapid intervention and timely access to other services for the clients. It could provide an avenue for expert advice to be obtained on a regular basis or in regards to specific clients. Finally, networks between stakeholders could also facilitate a co-ordinated and comprehensive response that takes into account all of the clients needs.

Typical comments included: “Some young people need more intense therapy from health professionals, these cases should be referred to relevant agencies”, and “Professionals in the psychological/psychiatric communities are perceived to play the role of providing expert input to aid staff”, and “Attacking the problem on all sides and seeing the reduction in injuries and deaths”.

Many participants reported having positive informal working relationships with many stakeholders rather than formalised relationships. Most participants reported referring their clients to community services, such as

counselling services, when it became apparent that the additional service was required, which was often during the screening process: “We have a contract within the Children's Centre where one psychologist is our main contact, but several of the agency’s psychologists work with the youth we refer”. Some participants reported that rather than make a referral themselves they would recommend to the caregivers that these additional services be sought.

Some services had a Consultant Psychologist or Psychiatrist attached to their programme(s) as a source of expert advice and an avenue for referral: “Psychologists have a very important role; our programme has the access to a psychologist seven days a week”. Additionally, some services had formalised agreements with child services whereby they were obligated to report any suspected or evidence of abuse or neglect: “We have a duty of care that if we see or suspect anything untoward as regards to the client we either inform our line manager or relevant agency”.

Barriers to programme effectiveness and suggestions for improvement

Eight themes were identified, mostly common across countries.

A lack of support from service staff makes implementation difficult

Some participants reported that their management were supportive of programme development, but during implementation other staff within their own services did not always support them. They noted that this was primarily due to a lack of understanding about the role of the programme within the service and about deliberate fire lighting: “A proportion of staff not directly involved in the scheme believe the role is best carried out by social workers or youth workers”.

One participant noted the support they received from an existing programme operating in a different part of their country during implementation was of great assistance. Other difficulties during implementation included identifying appropriate staff to deliver the programme, and providing training during the programmes early development: “At the time we were planning the development of the programme we realised the first thing we needed to do was ensure we trained staff available”.

There are problems developing collaborative relationships with stakeholders

Some participants reported that stakeholders were not always supportive during programme development and implementation, and that this was primarily due to an underestimation of the number and seriousness of deliberate fire lighting. A lack of interest in fire lighting, and misunderstanding about the aims and processes

of the programmes were also identified: “Social services, police authority, both of these groups did not appreciate the seriousness and number of fire setting incidents”.

Some participants reported that a lack of staff, both in numbers and dedication to establishing and maintaining stakeholder networks was a barrier to ongoing collaboration between stakeholders: “Insufficient staff in the department to implement required charges and deal with the increase in demand for the programme”. Other identified barriers included poor understanding of deliberate fire lighting and the programmes established to prevent it, and poor communication of the various roles and priorities of stakeholder groups.

Some of the suggestions to facilitate collaboration between stakeholders include opening the lines of communication between the various services and professional disciplines. Open communication would allow for a common understanding of fire lighting to be established, and the various roles and responsibilities of the groups to be clearly defined and understood, and information to be shared between them: “If not communicated correctly, internal staff and external professionals can question the relevance or effectiveness of the scheme. This is overcome through discussing peoples' concerns and providing assurance as to the scheme's remit, role and professionalism”.

Better collaboration between stakeholders could enable faster and more effective pathways for referral: “I feel need to network with other organizations dealing with children and families. It helps with awareness of the programme and to contact the people in need of the programme”.

Some participants identified that this could be achieved by creating more time for programme staff to develop relationships and then formal networks with other services. Additionally, more referrals could occur form advertising the programme to increase awareness of it:

> The number of clients we deal with has gone up a lot, possibly due to referrals from courts and schools. In the past, they did not know we dealt with fire setters but now they do and we get a large number of them.

Many participants reported already undertaking advertising of their programmes, typically in brochures, posters and through media coverage.

Programmes are inadequately funded

Some participants noted that obtaining funding for implementation of the programmes was difficult. Staff salaries were reported most often as the biggest cost item during implementation, while resources (e.g., videos) and staff training followed this. Promoting the programme (e.g., brochures) was also noted as costly during implementation. The largest ongoing operational costs were identified as staff salaries and training: "Major cost items include staff wages and training…since the programme has been running, costs have risen in light of the extensive training and resources needed".

Most programmes are funded by the services that operate them. Some participants noted that part, or the entire budget for their programme(s) came from grants or stakeholder services. Some participants identified that they could increase the level and quality of their programmes with more funding (e.g., better resources, specialist trainers, advertising, cultural services). Typical comments included, "A bigger budget for programme to provide more professional materials…and better quality resources".

Service location can delay programme delivery

Many participants from state and countywide services reported that the large geographical area they covered contributed to delayed delivery of the programme, with practitioners either travelling to the clients or the clients having difficulty travelling to the programme offices for the intervention: "One of the biggest impacts on the successful delivery or otherwise of a program is the tyranny of distance. For the programme to become successful we need to have trained people who are accessible to the community".

One participant noted that while the programme was based in a central location so that it could access most parts of the state it aimed to serve, "children would be more likely to follow through with the programme if they had someone local to follow-up with them".

However, some participants pointed out that the programme having a central coordination point enabled the practitioners to be supervised, contributing to uniform delivery of the programme and therefore its effectiveness: "It is organised from a central location which assists with continuity".

Fire lighters are often directed to attend the programme

Many of the participants reported that they got referrals from the justice system. These fire lighters are often mandated to attend the programme and typically do not want to be involved. Some participants reported that they were often less successful with these clients because they did not attend the programme voluntarily and

they typically had a multitude of psychological issues. Some participants also reported that caregivers sought the programme's assistance rather than the fire lighters themselves.

> Generally, the parents will call us in or the school will call us in. In that case, the client who is usually young will comply with the programme. We get good results with them. However, sometimes they will be referred to us by the Court system (Magistrates Court) and that is when it gets tricky. The client must comply with the request but often it's obvious that the client is just going through the motions only. Often they have much bigger problems than just fire setting. The individual is not motivated at all and we are up against it from the start.

> Clients themselves often initially have no desire to participate, but assistance of programme is sought by family.

The provision of cultural services is variable

Two participants, from different countries, identified that they employed an independent person to provide cultural advice to the programme. Some of the participants reported having an informal process where advice about cultural issues was sought from service personnel or people in the community who they thought might be able to help: "The coordinator informs the practitioner of cultural sensitivities".

The extent that culture was addressed in programme delivery was variable, with some participants reporting that culture was always considered and should be considered, and others reporting that consideration of culture was not necessary. Many participants noted that their services provided a language interpretation service and some provided published material in different languages: "Information leaflets are produced in various languages; arrangements are also in place for translator services". Two participants also noted that clients and practitioners were matched according to culture (e.g., ethnicity and gender) when possible: "If there is a client is of a different culture the supervisor will try and match the client with the practitioner".

Suggestions for improving cultural services included networking with organisations and people in the community who could provide cultural support, increasing the availability of interpreters and resources in non-English languages, and training targeted towards cultural issues:

> Spend time with what cultural resources you have locally and learn as much as you can before such clients present themselves to you so you have a good understanding of their culture and how to approach them with the programme.

Further training is needed

Many participants recommended further training as being beneficial. Some participants suggested ongoing training with specialist trainers from outside organisations and possibly "setting up an accredited training course". Many participants suggested more training in communication skills and in the psychological issues that may be present. Typical comments included: "More awareness of the impact of disabilities, and emotional disturbance on motivation, and more specific intervention strategies to use in such cases", and "Any classes or education that teaches you how to deliver your programme and how to talk to the child involved. Another tool would be the knowledge of how to determine how much involvement each child needs".

One participant suggested ongoing cultural training would be useful: "having people from different cultures speaking at team meetings on the key points to be aware of when dealing with people of their culture".

Resources need updating

Some participants suggested that more resources targeted to specific groups, such as young children, teenagers and clients with special learning needs, would be useful: "Occasionally I have found that 'regular' materials do not reach the client, therefore, look for an alternative. This is usually the case with those with learning difficulties, or disabilities".

Some participants suggested more updated visual resources generally. One participant reported developing a compact disk for parents and children and another reported developing a disability and disorder dictionary for their practitioners to assist them with these client groups.

Services providing therapy for people who have deliberately lit fires in Australia, Canada, USA and UK

This section of the report summarises the comments from four services that provided therapy to people who had deliberately lit fires, within the community or hospital settings, and one organisation that provided a packaged therapeutic intervention and training for professionals. Fire lighting clients of three of these organisations were adult (over 17 years old) mentally disordered offenders and one organisation provided therapeutic services to young people.

Description of programme characteristics

Goals of the services

Most of the service goals were concerned with addressing the mental health of their clients. While addressing any overreaching mental health issues, therapy also typically included addressing the thoughts, beliefs and behaviours connected with their fire lighting and any interpersonal deficits functionally connected with their fire lighting behaviour, such as self-esteem and problem solving. One service's goals were related to providing high quality assessment and training.

> Address problem solving and some defective thinking, particularly consequential thinking; begin to explore empathy within a fire related educative format. Addresses risk need and responsibility issues.

> The main aims of our treatment programme are for group members to: 1. Improve self-esteem and personal effectiveness; 2. Consider the underlying functions served by their fire-setting; 3. Receive education regarding the potential effect of fires; 4. Show improvement on factors closely associated with fire-setting, such as inappropriate levels of interest in and attitudes towards fire, and distorted beliefs concerning responsibility for and risk factors associated with fire-setting; 5. To develop more effective emotional and behavioural coping strategies to avoid re-offending.

> Provide high quality assessment of fire setting behaviour among children. Participate in research efforts to advance our knowledge base on fire setting and provide high quality trainings to mental health, child protection, and fire service.

Assessment and intervention services

The services typically provided a full assessment and cognitive-behavioural therapy (CBT)[2] , which included one or more of the following components; psycho-education, cognitive restructuring, problem solving, and

aversive reconditioning. Therapies utilised that were not common among the services included medication, insight into offending behaviour and empathy work. The reported number of sessions varied, with more than 40 reported by one service. One participant reported that CBT was effective because it was evidence based and manualised, facilitating consistent and targeted delivery of the intervention:

> Cognitive-behavioural and psycho-educational approaches. A typical week's schedule of activity for the programme participants in a 40+ session programme varies according to the phase of the programme. Extended therapy with client by professional in programme includes a cognitive-behavioural treatment programme aimed at patients with mild intellectual disabilities.

> Individual psychotherapy (CBT forms), psychiatric management, problem solving, medication, CBT, cognitive restructuring, aversive reconditioning. Psychiatric assessment and treatment where indicated.

Interventions the participants reported being less effective included, unstructured and generic approaches, punitive approaches and those based on shocking or scaring clients, psychodynamic approaches (because there was not strong empirical evidence to support their use) and visits to fire stations with fire lighters are insightful but cannot control their impulses. Typical comments included, "The ones that are based on shock, as the evidence suggests, are not effective'.

Staff of the programmes

The service personnel typically consisted of professionals with experience in mental health, such as forensic nurses and psychologists. The characteristics they purported to be important in their staff included interview, assessment and communication skills, and an interest in or training in the area of fire lighting: "Staff members must possess excellent interview and assessment skills, communicate effectively both in oral and written form, and have advanced training in fire setting behaviour issues".

[2] CBT is a collection of interventions with a central focus on identifying and modifying the cognitive biases, skills deficits and behavioural actions that contribute to the aetiology and maintenance of a presenting problem.

Current training

Research was the most common method of training cited by the participants, either conducting research or keeping up to date with the literature on deliberate fire lighting. One participant commented, "The development of a formal approach based on evidence" was the most useful aspect of training. Other existing means of training cited by the participants included attendance at workshops on assessment and diagnostic tools, and informal training by other staff members: "Staff are provided with regular updates on most recent research. Training on diagnostic tools added to our assessment protocol and information on available conferences".

Cultural services

One service had a formal cultural unit that they could access for advice and interpreter services. Some participants reported that culture was considered on an individual basis, and some participants reported that culture did not need to be considered because their clients where culturally homogenous. One participant identified that more central guidance with cultural issues would be useful. Typical comments included: "Case-by-case basis", and "Tend not to have a broad range of cultures within our fire setters' population. The issue of meeting the needs of ethnic minorities has not been pertinent to our client population to date".

Measures of success

The most common method for services to measure the success of their therapy, as reported by participants, was via standardised measures of factors functionally related to fire lighting behaviour (e.g., ability to form and maintain relationships) and risk assessment measures. Some services measured their success by the number of clients that had re-offended on follow-up or had been readmitted to the service. Two participants detailed their data collection as follows:

> We use a broad range of measures assessing those factors which the literature suggests are functionally related to fire setting: Goal Attainment Scales (a semi-structured interview assessing a) acceptance of guilt, b) acceptance of responsibility, c) victim awareness, d) appropriate emotional expression, e) ability to form and maintain relationships, f) understanding of risk factors; Fire Interest; Fire Attitudes; Anger disposition; Anger expression; Self-esteem; Depression; Locus of control; Assertiveness.

> Aggression data; personality functioning; behavioural data; fire setting behaviour characteristics including motivation, estimated risk level. Children's Firesetting Interview-Kolko, Firesetting Risk Interview for Parents-Kolko, Aggression Questionnaire Jesness Inventory CBCL - youth and parent versions; Fire history interview- Massachusetts Model. Structured interviews with child and parents.

Outcome

One participant reported that they have a "poor evaluative history but we are optimistic that it is now being taken seriously and that at least two services are beginning to collect data". One participant reported that out of the "three fire setters seen by the programme, only one had re-offended". Another participant reported that their data collection efforts had revealed encouraging results.

Barriers to effectiveness and suggestions for improvement

Three themes were identified, mostly common across countries. There were no distinct themes identified for factors that contribute to successful outcomes.

Collaboration with stakeholders is useful

Some of the participants commented that they would find it useful to work collaboratively with their stakeholders (e.g., fire services) because it would enhance currently available evaluative data, facilitate a more appropriate and uniform response and foster more commitment and attendance by their clients. They cited the lack of experience working together as a possible barrier and long-term commitment by all stakeholders toward resolving fire lighting as a potential solution to this.

Typical comments included, "Increase capacity to respond appropriately and uniformly to fire setting incidents which will result in lowered recidivism rates", and "Identification of fire setting as a problem, making a long term commitment toward resolution of the problem".

Training is needed

Suggestions for further training included, continuing to develop a research and evidence base for clinical practise, the application of standards to the training provided and staff development in skills such as communication: "Accreditation standards being applied. Staff development (e.g., all staff trained in pro-social modelling, communication skills and where relevant group work). Site standards introduced (e.g., support supervision referral procedures)".

Current therapy provided can be improved

Suggestions to add to therapy or to emphasise in the current therapy provided included, evidence based interventions, more psychological programmes and therapies (e.g., to develop skills functionally related to fire lighting, such as communication and emotional regulation), group therapies and relapse prevention work:

"The development of alternative skills and qualities which research suggests are functionally related to fire setting (e.g., communication, self-esteem, responsibility, emotional management, assertiveness, social problem solving)", and "The programmes need to be evidence based and not based on approaches that are comfortable to do and those that have always been done".

One participant reported that central co-ordination of the therapy interventions provided would be useful by providing consistency and a basis for ongoing evaluation. Another participant identified that having skilled and knowledgeable staff was important for effective treatment: "The ability to identify and recruit staff with an already existing skill set and knowledge base in fire setting behaviour".

Services facilitating the provision of education and therapy for people who deliberately light fires in Australia, Canada, USA and UK

This section of the report reviews nine services that facilitated the provision of education and therapy for their clients who had deliberately lit fires. These services typically represented fire services and mental health organisations that were in formalised partner networks or coalitions whereby the fire services provided an educational intervention and mental health organisations provided therapy. All fire lighting clients were young people, typically up to 18 years old. Two services saw young people up to 19 years with special circumstances and one service's clients were between 11 years old and 15 years old, only.

Description of programme characteristics

Goals of the programmes

All of the services had the underlying goal of preventing further fire lighting behaviour. Many conducted a risk assessment and all facilitated provision of an intervention by their own service or a network partner. Many services mentioned the formalised collaboration between the fire service and mental health organisations in their goal statements. Typically, the fire services conducted an educational intervention targeting fire safety and the dangerous consequence of unsafe fire use while mental health organisations conducted comprehensive risk assessments and provided individualised therapy (e.g., communication and social skill development). Most services had the goal of including caregivers in the assessment and intervention process.

Descriptions of programmes included the following:

> The programme was designed to provide an intervention for juvenile fire setters. The underlying goal and objective was to develop an empirically based clinical approach and fire service educational approach. This meant developing instruments, evaluating them and then disseminating the programme to different sites.

> This is a collaborative program that brings together fire service and mental health professionals to work with children and their families to eliminate dangerous fire-related behaviours. Fire service provides families with fire-safety checks and fire education and mental health professionals conduct risk assessment and provide parent and child-focused treatment within a mental health framework.

> To provide the most comprehensive and professional assessment and treatment for problem fire setting. To provide a comprehensive assessment of fire setting behaviours to include environmental and individual factors related to problem fire setting. To provide an environment that encourages active participation by parents and/or guardians in the assessment process. To construct intervention recommendations and aftercare plans that are highly individualised. To provide comprehensive treatment and intervention, at a residential level of care, for problem fire setting. To provide regular communication on treatment progress to child, parent, and other professionals.

Implementation of the programmes based on need and partnerships

The impetus for most services to implement their programmes was an identified community need and a need for a uniform approach within a particular region. Most participants identified that the fire services facilitated programme development by establishing partner networks or providing guidance for services during programme development and operation:

> At start-up, there was a need for a uniform programme for fire setters in the area. There was no real commitment by Kids Mental Health so this brought forth the idea of bringing the two professional groups together. Instrumental groups/individuals in getting the programme off the ground included the Fire Marshall who approached mental health to start a programme.

> Fire service personnel approached children's service providers and presented the program for consideration with the need to eliminate fire setting behaviour… Individuals/groups that were instrumental in getting the programme off the ground included local fire services representatives…and local children mental health centres.

One participant reported that during implementation they discovered that a full background history of their clients who were referred by the courts was required to ensure the safety of their staff. Additionally, that training was required in working with young people that had been abused and/or who were aggressive.

Intervention services

All of the participants reported that they conducted an initial assessment or screening of their clients to gather background information, clarify the fire lighters motivation for lighting fires, and to assist treatment planning to meet the clients' needs:

> Referrals are taken through telephone or email contact, assessments of fire risk are completed by two members of the coalition.

> A psychological questionnaire to identify the category of fire setting activity and other issues the child may have. It is scored and they are allocated to a category according to motivation that enables them to be allocated to an intervention.

All of the services facilitated the provision of fire safety education, including education about the dangerous consequences of unsafe fire use. This was usually delivered by fire services and some reported including home safety assessments:

> This is a collaborative programme that brings together fire service and mental health professional to work with children and their families to eliminate dangerous fire-related behaviours. Fire service provides families with fire-safety checks and fire education and mental health professionals conduct risk assessment and provide parent and child-focused treatment within a mental health framework.

All services facilitated the provision of therapy to meet the needs of the fire lighter and often their caregivers. Most services provided family therapy and many included individual work with the fire lighters. The therapeutic models utilised most often were systemic family therapy[3] and cognitive-behavioural therapy. Other therapeutic models identified included, "play therapy with the younger children, which enables them to express their feelings more freely", "client-centred therapy"[4], and "solution-focused therapy"[5]:

> Our portion of the programme intends to determine the underlying psychological and social reasons for the child's fire setting behaviour and to intervene, via Family Therapy, in the process. Our goals are not only to educate the children and families on fire setting, but to teach new and more adaptive behaviours, including but not restricted to assertiveness, communication skills, social skills, self-esteem enhancement, parenting skills, reinforcement of positive behaviour and logical consequences for of negative behaviour. The first task that we must accomplish is to establish rapport with the client, and then to determine what are the internal and external factors that motivated the fire setting. From there we can do treatment planning for interventions.

3 Systemic family therapy takes the view that problems reflect the systems (family, social, school, etc) in which they occur and the family, not the individual is the unit of treatment.

4 Client-centred therapy is a method of therapy that emphasises the establishment of a warm, accepting therapeutic relationship that frees the client to engage in the process of self-exploration and self-acceptance.

5 Solution focused therapy encourages peoples to look at ways they have coped successfully in the past. New solutions and alternative responses are practised to encourage new behaviour or alternative responses.

> There is a once-a-week Family Therapy session with a licensed professional who has had specific training in working with fire setters. Therapists are always available for extra sessions in case of a crisis, and for telephone consultation when desired by the child or the parents. We have many licensed clinicians, and they are free to use whatever paradigm they feel is effective within a Family Therapy Structure, so we may see Cognitive-Behavioural therapy, Client-Centred therapy, Solution-Focused therapy, Play Therapy, Brief Psychodynamic therapy, or others. The important thing is that they get at the root issues that are causing the child to engage in fire setting behaviour, and then modify the circumstances and provide support so that the child and the family begin to function in more adaptive ways.

Many services also provided adjunct residential programmes for young people with problematic home environments and/or who were experiencing behavioural or academic difficulties. Some services also made available a variety of other services, including group therapy, alcohol and drug counselling and referrals to other community services and resources:

The programme is typically delivered at the service site

Typically the programmes were delivered within the service (e.g., at the fire service or mental health clinic). Some fire services delivered their educational component in the clients' homes and some provided courtesy home safety assessments if requested. One participant reported conducting the first visit in the home and then the rest of the programme either in the home or at the service site, depending on the client's preference

Funding of the programmes

Local and state governments funded the services, directly or via grants. Some participants reported that the programmes were funded by the services they sat within and one participant reported that some of the initial start-up funds came from fire services: "Most funded by individual agencies. Funding can come from a multitude of sources (e.g., grants from FEMA), most done at local level".

The major cost items during implementation were staff salaries, consultation fees and training.

Stakeholders of the programmes

Stakeholders of the programmes were identified as fire services, mental health organisations and professionals, schools, social services, child protection services, law enforcement and justice services, housing services, environmental organisations and the public.

Staff of the programmes

Staff who were employed within existing services (typically, mental health services and fire services) operated their programmes. Schools and District Attorneys' also operated some programmes in the USA. Within these services, some programmes were delivered by designated staff especially trained to deliver them, while other services utilised a range of generic staff to deliver their programmes as one of their roles within the wider service.

Characteristics considered important in programme staff included, an "interest in fire setting behaviour", an interest in working with young people, the ability to problem solve, and the ability to work within a multi-disciplinary team.

Some participants identified that high staff burn out rate or turnover could result in the loss of experienced and trained staff, and necessitate ongoing training requirements. One participant suggested allowing "people to step away from the work for a while" could be a solution to staff attrition.

Current training

Some participants reported that the staff who delivered their programmes were provided with the opportunity of accredited training:

> A 16 hour class developed that is delivered that meets standards (reviewed NFPA 1035 standard, and we found areas that we wanted to increase some standards e.g., state wide data collection forms/screening tools). Performance standard built into it (i.e., not just classroom knowledge only). Have to complete task book log to demonstrate that they can interview a family for a minimum of three times and observed by a specialist, which is signed off by an observer (i.e., a mentoring system). Then certification can occur.

> Juvenile Firesetter Intervention Specialists, which comes under the National Fire Protection Association's 1035 Standard.

Some participants reported standardised training was delivered by the programme developers: "All trained in CBT techniques by the… four days training. Assists them to deliver the tools".

Some participants reported that their services provided different training according to the role of the staff in the programme. Typically, fire service personnel received training about delivering educational interventions while mental health staff received training targeted towards the delivery of therapy. Conferences, workshops, newsletters and case consultation or professional supervision were also cited as methods of

training. One participant reported that they found "the use of a specific manual approach that provides specific intervention strategies and has been researched" the most useful aspect of training. Training areas included assessment, intervention, child and adolescent development, information about working with young people who deliberately light fires, and "coalition building with services to provide treatment and resources and programme information". One participant reported that they had not received any training "that is relevant to deliberate fire setting so far".

Cultural services

Many participants had training in cultural issues and diversity, including the assessment of cultural issues. Some participants reported that they provided supervision, although only one of these participants stipulated that this was specifically cultural supervision and noted that, "Cultural elders are difficult to secure for the programme, as they are in high demand in the general community". Many participants also reported that they provided interpreters for their clients when needed. One participant commented that they respected cultural diversity but did not stipulate how this was done in practical terms. One participant reported that meeting the cultural needs of its clients was the responsibility of its referral source and did not regard ethnicity as an issue within its programme: "We have all ethnic minorities on the programmes and the weekly feedback forms on the sessions do not highlight any problems in that area". One participant also reported "we are trying to hire more ethnically diverse staff".

Measures of success

Most of the participants noted that the success of their programmes was measured by recidivism or the number of their clients referred back to the programme. The participants all claimed that their programmes had low recidivism rates, with an upper limit of 10%: "Over the time that data has been collected the outcome of the programme indicates that child caused fires and garbage fires have decreased in 2005 and re-referral rates are estimated at 10%".

Many services also utilised pre and post testing on measures of psychosocial factors associated with fire lighting behaviour (e.g., self-esteem) to assess change in the fire lighters. Other measures of success that were identified included client satisfaction with the programme, the level of knowledge the fire lighter retained, the level of progress the clients had made since completing the programme and a reduction in the number of deliberately lit fires within the programmes locale.

Services typically conducted an informal evaluation of their programmes during follow-up with the fire lighters and their caregivers. The reported follow-up period ranged from two weeks to one year. Some participants suggested that the programmes should conduct follow up at six months and one year.

Typical comments included:

> Programme outcome or effectiveness is measured by the reduction in child caused fires and re-referral numbers.

> Decreasing fire involvement and increasing knowledge and fire safety, no further incidents of fire injurious behaviours, a happier kid with more resources, parents better able to manage their child's behaviours and having a better understanding of their child.

Factors that contribute to successful outcomes

Four themes were identified, most of which were held in common across countries.

The programmes operate within collaborative service networks or coalitions

All participants reported a strong collaborative network or coalition between their service and stakeholders, in particular those who delivered the programme. Collaboration existed at all levels from management through to assessment, intervention and referral of clients: “Members of the coalition including outside services and professionals work in co-operation with fire department personnel at all levels of the programme including assessment”.

Some participants also reported having central committees or advisory boards to oversee the operation of the programmes at the various stakeholder sites: “We have a coalition at local level and an advisory board at state level…twice per year we meet and develop strategic goals to work with (e.g., develop a screening tool)”.

One participant noted that it was initially difficult to build the stakeholder networks and another noted that maintaining the relationships could be challenging: “when a community is first organising there is a lot of creativity and energy but maintaining the programmes can be defeating for a lot of people”, and “when in crisis everyone meets and when it goes quiet it goes dormant and needs to be jump started again”.

One participant reported that good relationships between individuals in the various organisations facilitated the initial development of stakeholder networks and “organisational relationships [were] formed after this by

getting agency heads to endorse the model". Some participants reported that the operation of the stakeholder networks was assisted by communication between the partners, including each other's roles and responsibilities, although many participants noted that stakeholder relationships could be strengthened by more communication between them. Some participants reported that regular meetings between the stakeholders provided a useful forum for communication: "Community meetings have been most effective in actively involving all stakeholders in implementation and decision making". Some participants reported that the stakeholder partners of their programmes had integrated computer applications that enabled timely and reciprocal information sharing while still observing any legal and ethical requirements, such as confidentiality:

> We track our juvenile fire setters in a programme that can be accessed from the Internet and is password protected. Entries can be made by any member of the committee. Investigators record the fire report information, educators record the pre-post tests and parent questionnaires, and mental health records the type of juvenile fire setter assessment (curiosity, crisis, delinquent, strategic and pathological). Mental health therapists also record their case notes; which are not accessible to the fire service or law enforcement.

Additionally, some participants noted that written documentation that outlined the various responsibilities and operating procedures of the partners was important. One participant reported that their documentation was renewed each year and its practical application was built into the orientation and training of programme staff:

> At local level, each programme is built around a Memorandum of Understanding that all agencies sign into and that describes referral processes and so on. Each agency explains their role in the programme, each states how they are going to let people know about its Memorandum of Understanding (can do this during basic training and orientation for the programmes). Contracts are renewed within the region each year and signatures on the Memorandums of Understanding are updated and they have to make sure that the training for it is up to date.

Caregiver involvement in the intervention is important

Most participants reported involving caregivers in the entire process of the programme, including assessment, decision making, and intervention (e.g., education and family therapy). Some programmes also facilitated the provision of services to meet the needs of the caregivers' mental health. One participant reported that they involved the caregivers in the assessment but not in treatment: "providing families with practical solutions such as behavioural management strategies, education and addressing parental mental health issues".

Some participants reported that the fire lighter's attendance was mandated by the courts or social services, or facilitated by concerned caregivers. Some participants noted that lack of caregiver cooperation with the

programme or the inability to provide therapeutic services for the caregivers had contributed to poor outcomes for their young clients.

Access to community services and other resources increases programme effectiveness

Many of the participants reported that stakeholder collaboration contributed to successful outcomes for fire lighters and their caregivers: "Other factors that negatively affected outcome include any one agency working in isolation instead of with the coalition". Many also reported that raising public awareness of the issue and educating the public about fire safety was important. This included the caregivers of the fire lighters because they were often not aware of the devastating consequences of fire lighting. Some participants suggested increasing the available resources for caregivers, including running education groups: "Further additions to the programme could include a parent education group facilitated by members of the fire service and other programme partners". Once caregivers understand the consequences then therapy can provide them with the tools to change their behaviour and the behaviour of their children:

> Most families don't realise the destruction caused by juvenile fire setting, or the costs: personal, legal and monetary. Parents and the juvenile fire setters are more apt to take responsibility for their actions and think before they make choices, after this programme. Ongoing family therapy helps juvenile fire setter deal with stressors in their lives and gives the parents the proper tools to help their children.

Quality assessment tools and procedures are important for treatment planning

Many participants reported that quality assessment tools and procedures were important to provide information for treatment planning. The importance of a comprehensive assessment to identify the underlying motivations for fire lighting as targets for treatment is supported in the literature (Slavkin, 2000; Stadolnik, 2000).

> Identified program factors that contribute to particular clients doing well include a thorough assessment process with the client and his mother, and the underlying problem being discovered. A referral for mental health counselling was then made to help address this issue and thereby reduce the fire setting.

Some participants noted that increasing the extracurricular activities of their young clients contributed to better outcomes for them and one participant identified that showing "child friendly and educational DVDs [was effective] because it peaked the clients' interest".

Barriers to programme effectiveness and suggestions for improvement

Four themes were identified, mostly common across countries.

Developing collaborative relationships with stakeholders is a problem

Many of the participants reported that building inter-agency partner networks was essential for the implementation of their programmes, yet some identified that it was difficult to get support for their programme from some stakeholders during implementation. Reasons for this were they perceived the programmes would place more demands on staff and material resources, or they misunderstood the role of the programme and the professional requirements of those that would deliver it:

> One of the problems encountered during implementation was the selling of the programme to other professionals. Initially, they were not interested or thought they were doing okay already. The programme was sold to mental health by saying that these kids were on the books anyway and we're just offering extra resources for fire setting, and the programme was sold to the fire service in regards to education about the profile and the role of mental health, educating them about the literature. Discussed how the partnership makes it easy on both sides and each side fills the gaps of the other.

Additional funding would increase the resources available

Many of the participants identified that additional funding would assist them in providing more resources to the young people and their families. One participant noted that research on treatment outcomes was needed to establish an argument for more funding. Typical comments included: "More funding to assist families with resources", and "We need research on treatment outcomes and data to prove what we know anecdotally then the insurance companies would pay for it and then it would become billable".

Further training is needed

Suggestions for further training included international training of staff and further treatment research, formal classroom training, further workshops, and "more interaction with other clinicians who are working with fire setters, especially concerning formal assessment tools with which they are working". Some participants also suggested more training in cultural diversity and the relevance of culture to fire lighting interventions.

Some interventions do not engage young people

Some participants reported that prevention approaches that do not engage the fire lighters or their caregivers in face-to-face interventions were relatively less effective (e.g., written material such as pamphlets and telephone advice):

> Materials considered the least effective in reducing the incidence of deliberate fire setting include fire safety booklets or pamphlets because lack of interest in reading or low literacy levels in the youth age group. Education without assessment can miss risk level.

Other less effective interventions reported included, the provision of treatment without thorough assessment, approaches that might be perceived as "blaming", threatening or punishment oriented, and graphic images or visits to burn units. Typical comments included, "Yelling at the children, over-restriction, hitting, and lecturing. All these methods can lead to rebellious and increased negative behaviour".

One participant did suggest that having a victim or someone who had lit fires in the past come and talk with the young people on the programme might be useful:

> The programme has established that techniques such as a focus on fire stations, trips to burn units and graphic picture/video do not positively affect fire setting or its underlying issues. Other factors that negatively affect outcome include…a failure to engage the guardians of fire setters can also limit positive outcomes.

Adults with arson convictions

This section of the report summarises the interviews conducted with the adults who have five or more arson convictions in NZ. The following areas were predetermined and covered in the interview: their motivation for deliberately lighting fires, whether they still thought about lighting fires, their own ideas about what might have stopped them from lighting fires, their experiences with prevention initiatives and their suggestions for helping other people to stop deliberately lighting fires. Themes associated with each area were identified and are described in the following.

Motivation for deliberately lighting fires

Participants were asked what motivated them to deliberately light fires throughout their life.

Anger / Revenge

Many participants identified anger and revenge as a motivation for deliberately lighting fires. They recalled their motive for lighting fires as a way of getting back at people who they felt had wronged them in some way. These disputes typically involved family members or were for financial reasons: "She owed me some money and wouldn't pay me…burn the house down and that would get rid of her…she'd move out of town", and "A lot of reasons, aye…revenge and for the attention and for the rush…doing something so big".

The participants chose fire as their instrument because of its ability to inflict a huge amount of damage, and therefore, have a greater impact upon the intended victim(s). This suggests a degree of pre-planning and an ability to think in terms of the consequences of their actions: "I had cars stored in there and the owner got rid of them because he wanted to re-rent the building so he could get more money, so I destroyed the building so he lost out on more money", and "I just wanted to beat her flaming head in but she would recover in a couple of weeks, but if I burnt everything in her house that's hers it'll take a while to recover".

Hide evidence / avoid detection

Many participants stated that they deliberately lit fires in order to hide evidence of another crime and to avoid detection by the Police (e.g., destroying any fingerprints):

> I cut myself while trying to hotwire it [car], so there was blood on the steering wheel…I need to get rid of this or I'm going to get caught…I was thankful that I'd torched it and got rid of the evidence.

One participant appeared to acquire a sense of power and control by evading the Police: "We sat back and laughed about it…being smarter than they are…until we got caught".

One participant also stated that he lit nuisance fires in order to draw the attention of the fire service away from the primary fire to optimise the damage caused.

Peer group acceptance / boredom

Many participants identified the need for acceptance by their peer group as a significant motivating factor in the fires they deliberately lit. These participants are also the youngest of the eight people interviewed, ranging in age from 17 to 21 years old. Some of these participants also identified boredom within their peer group as a contributing factor. Typical comments included, "Being around a group of people, mates, alcohol and all that…bored, nothing to do, stoned".

Excitement / attention

Many participants stated that they felt excited while they watched the fires they deliberately lit:

> It was exciting to watch it burn and stuff. It was a good feeling. When I was doing bushes it was nothing like watching the cars. Knowing it's not okay and exciting seeing the flames get so high…like a bonfire…but you know there are going to be consequences coming with it.

Some of these participants recalled having a fascination with fire during their childhood. One participant stated that he found it difficult to control the urge to light fires and required progressively bigger fires to feel excited: "I thought I'd never get back into lighting fires but when I saw the cars I felt the thrill again and it started getting worser and worser for me to control". Some participants stated that they liked the attention the fires received from the Police, media and the public.

Thoughts of lighting fires

Participants were asked whether they still thought about deliberately lighting fires and if they did what their thoughts contained. Many participants stated that they think about lighting fires. One participant stated that he does not think about lighting fires during the day but when he is asleep he frequently dreams of lighting fires: "Every second night I have dreams of fires burning stuff…during the day I think, nah that's not what I want to do, but it always ends up in dreams and I can't control it". Many participants stated that they did not think about lighting fires but they often thought about what the consequences of their past fire setting had

been: "Never. The odd night, flicking my lighter, thinking 'fuck what an idiot'. I had a lot going for me, a job for two and a half years, income, a girlfriend. Prison was a total wake up call".

Consequences for deliberately lighting fires

Participants were asked what consequences they had experienced for deliberately lighting fires. Most participants stated they had deliberately lit fires in the past, usually during their childhood, and that there were no consequences for these because no one knew about them. Typical comments included, "I only got caught for less than half of fires", and "There were no consequences because no one knew about it".

Some participants recalled their parents punishing them for lighting fires as a child: "When I was about 8 or 9 my father held piece of burning paper to my face…I felt the heat but I didn't get burnt…I cried and was upset".

Many participants identified difficulties with their employment, families and friends because of their fire setting and ensuing incarceration: "The hardest thing was telling my parents I got arrested … I'm sure they felt a big sense of shame".

Some participants identified positive outcomes from their incarceration, including improved relationships with family members, increased self-confidence and the opportunity to reflect on their fire setting behaviour. Typical comments included:

> Since being in prison I've been able to talk to family, there haven't been any arguments since I've been in.

> I was actually quite proud that I got caught because it gave me time to sit down and think without my mates around me. How can I overcome it, how it affects me and others. How to deal with situations and negotiate and try and help them see where I'm coming from.

Many participants identified thinking about the safety of the public or more commonly the fire fighters after they lit the fire(s):

> They had to bring the trucks in; I could see them from the hill. It didn't feel that good and I thought it was going to take over the whole lot, that it was too far gone…I was scared that we might get caught for it; it could have killed one of them. My mates and that didn't really care and they just said 'nah you're a pussy' and I just thought 'nah, what if it was you stuck in there'.

One participant decided to light a fire rather than commit an alternate crime because he believed the fire was less likely to harm him or others. Some participants justified the fires they lit as providing work for the fire service or assisting the owners to remove unwanted objects or vegetation:

> He's not really a victim, the firemen and their families were more the victims when they turned up…the firemen could have got killed putting it out and it would have made them the victims…I've got a daughter and she's an automatic victim because I'm in here…He's a victim but he's not the main victim…I put him down as a lesser victim.

What might have stopped you lighting fires?

Participants were asked what they thought might have prevented them from lighting more fires. Some participants could not identify what might have stopped them from deliberately lighting fires. Some participants stated that being caught by the Police earlier would have stopped them from lighting fires by removing the opportunity. These participants also identified other factors, such as injuries and social factors. Some participants reported that if they had witnessed someone being injured by a fire they lit, they might have stopped lighting more fires: "Someone getting really, really hurt. Quite badly injured. I don't know what I would have done with myself if someone had died but that would have definitely stopped me".

Some participants reported that improved employment or study access may have helped them to stop lighting fires. Many participants suggested that positive support from their family and friends, including communication, may have helped them stop lighting fires: "Just be aware of younger guys. For a young person it's that whole fire fighter phase…attention seeking", and "Keep an eye on them and more communication…I think it's a communication thing more than anything".

One participant identified that talking about their emotions might be helpful: "change your patterns, don't bottle it up I suppose…I bottled my problems up". Another participant externalised his fire setting and stated that he could stop lighting fires "if they didn't piss me off…I only see the fires I've done as revenge".

Experience with prevention initiatives

Participants were asked about their experience with prevention initiatives specifically related to their fire setting and other therapy they participated in throughout their lives and since being apprehended for their current arson offence(s).

Fire setting programme

Table 3 illustrates the self-reported type of treatment undertaken by participants. One participant reported contact with a specific fire setting programme (FAIP) whilst serving a previous sentence for an arson offence. He described being "shown photos and videotapes of fires and people being hurt… to show me the consequences of lighting fires". He stated, "[he] wasn't aware of the consequences of fire before the videos and photos". He went on to say that "it didn't really make a difference…I didn't think about the photos and videos when I lit the later fires". He reported trusting the practitioner because he "wasn't getting in my head" and the intervention was conducted without the presence of prison staff.

Table 3: Self-reported contact with treatment services and type of treatment undertaken by participants with arson convictions in New Zealand.

			Prison based treatment		
Participants	Community based treatment*	Psychiatric hospital	Prison Psychological Services treatment	Prison offending programmes**	Fire setting programme
01	Yes	Yes			
02			Yes	Yes	
03					
04				Yes	
05			Yes		Yes†
06				Yes	
07	Yes	Yes	Yes		
08				Yes	

*Including anger management, alcohol and drug programmes
**Included addressing fire setting as part of their offending
†Whilst serving a past sentence for arson

Despite his positive experience, the intervention had little impact on stopping him light fires: "I don't really know because I got out and lit more fires…I don't know why". He indicated that the timing of the intervention may have contributed to this, "it was at the start of my sentence so by the time I'd gotten out, I'd forgotten about it". He reported that treatment delivered close to the release date would be useful as well as having access to community-based treatment once released. He was not sure what kind of specific help would be useful ("inside your head help…seeing someone"). However, he identified that in order to acquire trust any intervention must be delivered without the presence of correctional staff: "I saw someone but I didn't trust her because I saw her in the same room as the probation officer, so I didn't say much; if I saw her alone, it would have been different".

Other treatment

Some participants reported having attended community-based treatment programmes, such as anger management and alcohol and drug services, and had spent time as inpatients in psychiatric hospitals as a result of their fire setting behaviour. They did not find these experiences helpful and claimed their fire setting was not directly addressed: "In the psych hospitals they told me I got an anger problem…I was given a few pills and told it'll go away", "The psych people said you're not crazy enough…they said arson is not a sickness…one doctor told me not to buy a lighter". These participants were older and had an extensive history of deliberately lighting fires.

Most participants had received individual treatment with a psychologist and/or attended prison based treatment programmes, which include cognitive-behavioural based interventions such as the analysis of their offence cycle, problem solving, mood management and cognitive restructuring. Some participants found this helpful, whereas another described feeling dissatisfied with the quality of treatment he had received over his lifetime:

> I found the offence chain helpful because it shows me what I went through in my stages and my reaction. I got stuck in that cycle every time I did a burglary and arson…I didn't find talking about family, past and problems with family as helpful.

One participant had never had any contact with treatment services. He believed it could be useful but had never sought help due to a "busy" life and prioritising social activities. Some of the other participants also reported that they would benefit from treatment specific to their fire setting behaviour, which is in-depth, genuine and leads to an understanding of their own behaviour.

One participant stated that he did not need treatment because his motivation for lighting fires was anger/revenge: "I don't think I've got a problem, its anger or revenge…paying back people that have hurt me".

Suggestions for helping other people stop lighting fires

Participants were asked whether they had any suggestions for helping other people to stop deliberately lighting fires. Some participants described the attitude of the person lighting the fires as being important. One stated "you can't help them unless they want to be helped", while the other stated "I don't think you can ever stop anybody from lighting fires…the only thing they could do is make lighters and matches illegal…outlaw petrol, outlaw gas".

Many participants identified the importance of early intervention and accessible treatment that specifically addressed fire setting and problematic social circumstances. Typical comments included, "If I'd got treatment years ago", and "More trying to raise the issue at school…counselling programmes at school...address the problem earlier rather than later".

Some participants identified the importance of matching the treatment to the individual's motivation for lighting fires. Typical comments included, "I do it because I'm pissed off, so to help me…learning how to handle my anger", and "Learning how to cope…what I mean is…ways to make me feel better".

The relationship with the practitioner was also important, with the development of trust, genuineness and listening skills the most important ingredients for successful treatment: "I saw someone but I didn't trust her because I saw her in the same room as the probation officer, so I didn't say much. If I saw her alone it would have been different".

Whether the intervention was delivered individually or in a group format also appears to be important, although the preferred mode varied across participants:

> Me, I can't talk to a joker…I think he's looking down on me with his fancy degrees. A woman will sit there and listen and won't try to… 'the book says this', you know what I mean…there are a lot of people out there who think they can help but they take it all from texts.

Chapter 4: Conclusions

Description of programme characteristics

The *FAIP, educational*, and *combined* programmes had the common goal of reducing the occurrence of deliberately lit fires and the consequences of them, by providing an intervention service. The *combined* programmes also typically stipulated the involvement of caregivers in the intervention and cited the important of collaborative relationships between the fire service and mental health. In contrast, the *therapy* programmes tended to focus on addressing the general mental health of their clients, with their fire lighting being an aspect of this.

The *FAIP, educational*, and *combined* programmes identified that they were implemented out of community need, in both the number of referrals received and the number of deliberately lit fires occurring in their area. In all cases, fire service personnel were instrumental in developing the programmes. In contrast, *therapy* programmes tended to operate within existing services, such as psychiatric hospitals or community mental health services.

The intervention provided by the *FAIP, educational*, and *combined* programmes all consisted of a consent process, screening of the clients, fire education and an home safety check that was delivered by fire service personnel, and the use of resources (e.g., DVDs and smoke detectors). The *combined* programme also typically conducted a comprehensive risk assessment of their clients that identified targets for further therapy (e.g., CBT). Mental health professionals carried this out as a standard part of their programmes. The *therapy* programmes also conducted risk assessments and therapy, which included some psychoeducation, but this element was typically conducted by mental health professionals rather than fire service personnel and did not appear to be as comprehensively done as the in the other programme groups. The *FAIP* and *educational* programmes generally identified that they could refer their clients to mental health professionals and other community services but the facilitation of further therapy for their clients did not appear as consistent as the *combined* or *therapy* programmes. The use of combined approaches that include fire safety education and psychosocial interventions appear to be more successful than those that single intervention approaches (Barreto, Boekamp, Armstrong, & Gillen, 2004; Kolko, 2001).

Both *FAIP* and *educational* programmes identified that a central group or committee that oversaw their programmes at a strategic or policy level guided them. Co-ordinators managed the programmes on a day-to-

day basis; the intervention was delivered by fire service practitioners and mental health professionals who consulted to FAIP and some of the educational programmes. The staff of both the *therapy and combined* programmes consisted of existing service personnel. Mental health professionals staffed the *therapy* programmes and both mental health and fire service personnel operated the *combined* programmes out of their respective services.

The *FAIP, educational*, and *combined* programmes all provided initial training for their practitioners that included their screening or assessment tools, the intervention and working with people who deliberately light fires. Both the *FAIP* and the *educational* programmes utilised a mentoring system where inexperienced practitioners would observe experienced practitioners delivering the intervention. The *combined* programmes provided different training to the fire service personnel and mental health professionals, according to their respective roles in delivering the intervention. They also identified the inclusion of accredited training courses, whereas these were not mentioned as currently occurring with the *FAIP* or *educational* programmes. All programmes identified conferences, workshops and seminars as being part of their current training methods. However, the *combined* and *therapy* programmes appeared to place more emphasis on these. The *therapy* group also mentioned keeping up to date with the literature and the *combined* group reported the inclusion of service network building strategies in their training. While these forms of training did not feature in either the *FAIP* or *educational* programmes, both groups reported the usefulness of peer support and practical learning tools, such as role-plays.

All programme groups provided some level of cultural supervision for their programmes, either by an independent cultural advisor or informally by practitioners within the programmes. However, the majority of programmes did not report cultural supervision as part of their programmes and some did not see the relevance of culture to them. All programme groups reported being able to access interpreters when required. The *FAIP* was the only programme to report an embedded national structure of cultural consultation targeted to a minority group, within their wider service. The National Māori Advisor and the Iwi Liaison Officers within the NZFS are responsible for promoting and developing fire safety for Māori communities. The NZFS working in partnership with Māori to assist in the effective delivery of services to the Māori community is in accordance with Article 1 of the Te Tiriti O Waitangi, under kawanatanga (Hoskins, Smith, & De Santolo, 2001).

All programme groups measured their success by their recidivism rate, which was based on the number of fire lighters who received their intervention and then were referred back to their programme within a given

time period. The *FAIP, educational*, and *combined* programmes used client feedback to assess their success qualitatively; the *educational* and *combined* programmes used the number of deliberately lit fires within their region as an indicator of programme success; and the *combined and therapy* programmes also used standardised measures of factors functionally related to fire lighting behaviour, which were administered by mental health professionals. The *FAIP, educational*, and *combined* programmes all reported a low recidivism rate. The outcome reported by the *therapy* programmes was variable with one service reporting having treated three fire lighters, one of whom was re-referred; one reported encouraging results; and one reported that they did not currently measure outcome.

Factors that contribute to successful outcomes

A dominant theme for both the *FAIP* and *educational* programmes was the importance of their educational based interventions being delivered by experienced firefighters in uniform. The uniform is easily recognisable, engenders respect in their clients and symbolises the experience they have with fire, which enables them to speak as experts. While the *combined* group did not specify this, fire service personal always delivered the education component of their interventions, suggesting the importance of it being delivered by a credible source. In contrast, this was not a theme for the *therapy* programmes, perhaps because mental health professionals delivered the psychoeducation element of their intervention. The *FAIP* programme identified that in small communities, primarily within rural areas, it might not be appropriate to wear a uniform and drive a NZFS vehicle because of the stigmatisation and blame associated with fire lighting.

Both *FAIP* and *educational* programmes reported that carrying out their interventions in the clients' home contributed to the effectiveness of their programmes because it was a non-threatening environment for their clients, it provided the practitioner with insights into the lives of the clients that could assist with appropriate referral making, and it facilitated home safety assessments. Those *combined* programmes that delivered the fire service education component in the home also reported the benefit of being able to conduct a home safety assessment. In contrast, the *therapy* programmes all conducted their interventions within their own facilities, and the therapy component of the *combined* programmes was also always conducted within their facilities. Some of the programmes from the *educational* group also conducted their educational interventions at the fire service office or at community sites, such as schools. These programmes reported that these sites for programme delivery were not always ideal due to travel time for the clients that could affect engagement, and facilities did not always provide privacy or space for all family members.

Both *FAIP* and *educational* programmes identified that a non-judgemental and empathetic approach was important for the establishment of rapport with their clients. All programme groups reported that punitive approaches were not effective. An interest in working with people who light fires and good communication skills were considered essential qualities of their practitioners. The adult fire lighting participants support this with their comments that the relationship with the practitioner was important and that this was facilitated by genuineness and listening skills. In addition, the *combined* programmes noted that the ability to work within a multi-disciplinary team was important.

A dominant theme for the *FAIP, educational* and *combined* programmes was the support and involvement of the caregivers in their programmes. The caregivers were considered sources of collateral information during screening or assessment, they often motivated the fire lighters to take part in the programme and they were vital for the reinforcement of the material learnt during the intervention (e.g., fire safety rules). The *combined* programmes also reported providing services to meet the mental health needs of the caregivers. This corresponds with the evidence that fire lighters typically come from chaotic home environments (Dadds et al., 2006; Kolko et al., 1992) and the importance of including caregiver targeted interventions to address such mediating factors as monitoring and supervision of their young charges (Walsh, Lambie, & Stewart, 2004). In contrast, the *therapy* programmes did not stress the importance of caregiver involvement. However, many of these programmes were conducted within psychiatric or forensic settings and/or with adult fire lighters where the involvement of family may not be so pertinent.

A theme that emerges from the *FAIP* and *educational* programmes is that the home safety assessment and the fire safety education interventions provide the fire lighters with knowledge they previously did not have and this empowers them to make more responsible decisions in the future. This is supported by the literature, which clearly shows that fire safety education leads to increased fire safety knowledge and lowered recidivism rates, particularly if it is skills based (Franklin et al., 2002; Gaynor et al., 1987; Kolko, Watson et al., 1991; McConnell et al., 1996). While this is not a theme that clearly emerges from the *combined* programmes they reiterate the importance of a distinct educational component delivered by the fire service, which suggests they believe it has the capacity to increase the fire lighters knowledge and interrupt fire lighting behaviour. In addition, both the *combined* and *educational* programmes highlight the importance of educating the caregivers, not just the fire lighters themselves, because they are also often not aware of the consequences of unsafe fire lighting. The importance of educating the caregivers is supported by our adult fire lighting participants, who commented that they often received no consequences for their fire lighting from their parents as children, or received inappropriately punitive consequences. Moreover, the influence of

caregivers in mediating the transition from fire interest to fire safe behaviours, rather than fire risk behaviours is evident in the literature (Gaynor et al., 1987). The *therapy* programmes did not report conducting a home safety assessment and they also did not emphasise the importance of fire safety education, perhaps because this was a minor part of their programmes which tended to concentrate more on psychological therapies.

A dominant theme for the *FAIP, educational,* and *combined* programmes was the importance of networking with other services to enable early detection of fire lighters, provide collateral information about their clients and expert advice to practitioners, and to facilitate timely referrals to services of potential benefit to their clients. The *combined* programmes placed particular emphasis on this theme as being a crucial ingredient for their success. All programmes within this group had strong partner networks or coalitions with collaboration occurring at all levels of programme operation, from management to delivery of the intervention and follow-up. They achieved this by regular communication and documentation of the various services' responsibilities and operating procedures. In contrast, the *therapy* programmes did not stress the importance of stakeholder networks.

Winget and Whitman (1973) asked 300 adults how they would cope with a child who deliberately set fires and only one-third responded that they would contact mental health services. A more recent study reported that 25% would contact psychiatric services, 15% would contact their general practitioner and the rest identified the Police as their most likely port of call. Moreover, only one of our eight adults with fire lighting histories had taken part in an intervention targeted specifically towards their fire lighting. This suggests that to facilitate early detection and appropriate referral of fire lighters is important for both mental health services and fire services to not only form collaborative relationships with each other but also with the Police. It also suggests the importance of raising public and professional awareness of fire lighting prevention initiatives, which the *combined* programmes reiterated.

The often multi-problem presentation of fire lighters also suggests that a multi-service approach might work best. The adult fire lighting participants reported a variety of motives for their fire lighting (e.g., anger/revenge, excitement, acceptance by peer group) that lends further support to the idea that fire lighters are heterogeneous and interventions need to reflect this. Moreover, these participants themselves believed that had their psychosocial issues been addressed (e.g., family relationships, employment, access to appropriate treatment) they may have stopped lighting fires.

Since the 1980's, there has been a shift towards a cooperative approach to intervention for fire lighting (Hardesty & Gayton, 2002). Today, the literature concurs that scattered independent approaches are not as successful as services cooperating with one another and these approaches are not as successful as the formalised partner networks or coalition approaches, as evidenced by the *combined* programme group (e.g., Kolko, 1999; National Association of State Fire Marshals, 2000; Sakheim & Osborn, 1994).

Both the *FAIP* and *educational* programmes noted the flexible nature of their programmes, and available resources enabled the programme to be effectively tailored to match the fire lighters presentation, history, learning style, and age. Audio-visual resources, such as DVDs were reported as particularly engaging for the young people and effective at demonstrating the impact of fire lighting. The *FAIP* programme reported using photographs of burn victims when they considered it appropriate, whereas the *educational* programmes typically did not believe this was appropriate and the *therapy* programmes concurred with this assessment. The *combined* programmes also noted that quality assessment tools were important for effective treatment delivery but did not stipulate the parameters of them.

The usefulness of current training was a dominant theme for the *FAIP* programme, particularly role-plays, and peer observation. The *FAIP* programme also reported the usefulness of psychological training, such as learning about motivations of fire lighting, when to refer and likely accompanying presentations (e.g., ADHD, learning difficulties). The *educational* programmes also found role-plays and peer observation useful. They also noted the effectiveness of regular meetings between the practitioners and expert consultants to undertake case discussion. The *therapy* programme reported referring to evidence based literature was most helpful in their work and tends to reflect the practice of mental health professionals. Evidence based approaches were also valued by the *combined* programmes and standardised or accredited training was also reported as a strength.

Barriers to successful outcomes and suggested improvements

A theme for both the *FAIP* and *educational* programmes was a supportive peer environment within their programmes accompanied by a lack of support from the wider service staff. The reasons noted for this were lack of understanding about the role of the programme and in the case of *FAIP,* a perception that working with young people was not as valued as other fire service work. The *therapy* programmes did not comment on this aspect of their programmes. The effective working relationships within the multi-disciplinary teams that comprised their programmes were cited as a strength of the *combined* programmes. However, they did

not comment on the relationship between the staff who delivered the programme and those who did not, although typically all mental health staff were involved in programme delivery so presumably only the fire service personnel may have experienced difficulties with their wider services.

The *FAIP, educational* and *combined* programmes reported funding for their programmes has sometimes been inadequate, contributing to, for example, part-time staff rather than full-time coordinators and practitioners who could develop the programme, limited resources and lack of required campaigns to educate the public and professionals about programme services. All programmes identified that additional funding would enable them to identify more fire lighters, provide more resources for their clients and a better intervention service. The *therapy* programmes did not identify funding as an issue of particular importance, and this may reflect the small number of fire lighters amongst their more general case load and that these programmes typically operate within the umbrella of their services and do not require separate funding.

All of the programme groups identified that lack of collaboration with stakeholders was a barrier to programme effectiveness. However, the *combined* programmes reported that collaboration with stakeholders was only particularly difficult during implementation of their programmes. This was due to a mistaken perception about the role of the programmes, or about what operating the programme would require of the host service. These *combined* programmes cited the collaboration between services as a strength of their day-to-day programme operation. In contrast, the *FAIP* and *educational* programmes noted that poor collaboration with stakeholder services occurred during implementation and continues to occur, for example, low number of referrals of their programmes and poor pathways for referral to other services (e.g., mental health). All three *FAIP, educational* and *therapy* programme groups commented that they would like to see more collaboration between their programmes and other stakeholder services. Some of the common suggestions for facilitating this included, a commitment to cooperative operation, allocation of staff to building these networks, opening the lines of communication between services, and facilitating the sharing of information about each services operating procedure.

A theme for both the *FAIP* and *educational* programmes was the inconsistent perception of the availability of cultural supervision for practitioners. While an infrastructure for cultural support existed within the service that operates the *FAIP,* there did not appear to be a formalised process for practitioners to access this. Some *educational* programmes provided a formal process for cultural supervision but most did not. Within the *FAIP* and *educational* programmes there was a varied perception about whether culture should be considered at all, some believed it was already being addressed to the extent it should be, others believed it

was not important at all and still others argued that culture should be considered more than it currently is. Certainly, the literature suggests that culture should be taken into account because it affects every facet of an individual, from their well being, to the way they think and how they operate in life (Hoskins et al., 2001). Practitioners operating without appropriate cultural knowledge can engender discomfort, disrespect and fear of being misunderstood in their clients, which runs contrary to the establishment of rapport cited as a contributory factor to programme success (Shiang, Kjellander, Huang, & Bogumill, 1998). This appears to be particularly important given that the rate of Māori fire lighters seen by the *FAIP* is approximately 10% higher than the proportion of Māori in the NZ population. Both the *FAIP* and *educational* programmes noted that further cultural training would be of benefit. Cultural training can contribute to the provision of culturally sensitive and effective services to minority groups (Hoskins et al., 2001) and has practical implications for the retention of practitioners who have an interest in working with minority cultures (Ramirez, Wassef, Paniagua, & Linskey, 1996).

A dominant theme for the *FAIP* programme was that their screening tool was too long, confusing, culturally insensitive, and did not lend itself to data analysis for programme evaluation. The *combined* programmes noted that their extensive assessment was one of the strengths of their programmes, although this was undertaken by mental health professionals. Fire lighting is associated with a broad range psychosocial issues and motivations. Thus, it is unlikely that any intervention would be successful without an adequate screening or assessment measure to identify targets for treatment (Wilcox, 2006)

Both the *FAIP* and *educational* programmes suggested updating their current resources, including DVDs and developing resource packages for young children and older teenagers, and fire lighters with learning disabilities. The *FAIP* programme also suggested developing an educational package for caregivers, and a more comprehensive home safety assessment. The *therapy* programmes suggested increasing the use of evidence based interventions and the *combined* programmes identified that face-to-face approaches work best. The *FAIP* and *combined* programmes also suggested increasing the follow-up time to six months or one-year post intervention.

All of the programme groups reported that further training would be beneficial. Both the *FAIP* and *educational* programmes identified communication skills and psychological issues relevant to fire lighting as a target for training. *Educational* and *therapy* programmes recommended more standardised or accredited training. *Therapy* and *combined* programmes argued for the importance of ongoing research into effective

interventions. The *combined, educational* and *FAIP* programmes all suggested some of the training should be delivered by independent experts.

Chapter 5: Recommendations

The following recommendations are made for the future practice of the NZFS Fire Awareness and Intervention Programme (FAIP):

Prevention initiatives

1. To maintain and promote the existing education intervention delivered by FAIP for all young people who have demonstrated or are suspected of engaging in fire lighting behaviour, as part of a comprehensive multi-system prevention initiative tailored to the fire lighter and their caregivers.
2. To ensure that even when fire lighters are referred to partner services (e.g., mental health services and professionals), that FAIP should continue to be delivered, but within the framework of the young persons overall treatment, and this should be coordinated with the referral partners (see below).
3. To ensure that educational interventions focus on skill development.
4. To further develop educational resources according to need, for example, those suitable for young children, older teenagers, and those with special learning needs. Culturally specific resources should continue to be developed in collaboration with appropriate consultants; for example, the development of Māori resources should involve consultation with the National Māori Advisor and the Iwi Liaison Officers
5. To develop an educational package for caregivers to be delivered alongside the existing FAIP intervention.
6. To extend the follow-up period to at least one-year, with two contact points, and recognising such contact should be made by telephone.

7. To maintain and promote primary prevention efforts, such as the Firewise programme and media campaigns, that are designed to intervene at the level of fire interest and facilitate the development of fire safe behaviours to encourage fire safe behaviours in children. Education for caregivers should be included.

8. To increase public and professional awareness of fire lighting through education initiatives. In particular, education initiatives should target stakeholder services to encourage early identification of fire lighters and earlier referral to the FAIP.

Stakeholder relationships

9. To establish a framework for developing and maintaining networks between the NZFS and stakeholder services, such as law enforcement, mental health, schools, juvenile justice and social services, to ensure young people receive the services they require. For example, school services can assist children with learning disabilities, and mental health services can assist with individual and family therapy and are particularly relevant for young people with complex psychological and mental health needs. Specific recommendations for developing these networks:

    (a) Strengthen national coordination to provide consistency across NZ and to ensure implementation of coalition networks is consistent with NZFS and FAIP strategy

    (b) Ensure the NZFS works collaboratively with stakeholder services to develop the networks and that all services are included in all stages of planning, implementation and operation, for example, through multi-agency workshops and meetings

    (c) Identify key staff to develop relationships with key personnel in network partner services and provide resources, such as time and funding, for them to undertake this role

    (d) Formalise network partner relationships (e.g., MoU) and update them regularly to take into account changing staff and to keep momentum

(e) Ensure that referral pathways to FAIP, and from FAIP are clarified and formalised, so that all fire lighters can access FAIP; and so that FAIP can link their clients with the full range of services the screening tool and their clinical judgement identifies as necessary.

10. In particular, there is a need to develop systematic procedures for the identification and referral on of multi-problem fire setters to mental health services where they should undergo a comprehensive risk assessment of their fire lighting and associated factors, so that multi-system interventions can then be matched accordingly.

11. To promote regular and systemic communication among the network partners in order to ensure that the referral pathways are known throughout the NZFS and partner services. Suggestions for this include regular meetings and compatible computer systems to facilitate the sharing of appropriate information about fire lighting clients, while maintaining confidentiality and meeting any legal requirements relating to privacy of information.

12. To provide adequate funding for the development of partner networks, which is best achieved if all partners work together to enable interventions to be delivered to all those in need.

Screening tool

13. To develop a *brief* screening tool that identifies multi-problem fire setters for referral to mental health services for thorough risk assessment. Specifically,

(a) Ensure this tool is based on current best practice by reviewing the literature and evaluating the current FAIP screening questionnaire; and other available screening tools

(b) Ensure this tool facilitates the collection of data that can be used for ongoing outcome evaluation of FAIP and community fire lighting behaviour

(c) Ensure this tool collects information that can assist with tailoring the FAIP to the fire lighters and their caregivers' needs.

(d) Provide funding to evaluate its effectiveness as a screening tool.

Staff training

14. To ensure practitioners receive training on using the screening tool and that this training includes the overall purpose of the tool, the rationale behind inclusion of items, how to best deliver the questions to the young people and their caregivers, and scoring and interpretation.

15. To facilitate more psychological training for practitioners, including interviewing skills, communication skills and psychological correlates with fire lighting.

16. To facilitate cultural training with appropriate cultural consultation, including the areas of cultural sensitivity, the importance of considering culture, and how to best work with Māori families, Pacific Island families and other cultural groups in order to promote their active participation in FAIP interventions.

17. To facilitate ongoing peer observation for Practitioners so they can receive feedback on their delivery of the intervention; and ensure that all FAIP Practitioners receive regular supervision.

18. To implement an infrastructure for regular peer support, where practitioners can regularly meet, discuss cases and practice their skills.

19. To implement regular meetings, forums or workshops with Consultant Psychologists and other experts and practitioners, where cases can be discussed and professional supervision provided. These forums can also be used to discuss new research developments in the field to maintain best practice.

20. To educate the NZFS about the FAIP, its role, operating procedure and the importance of early intervention for fire lighting in preventing deliberately lit fires.

Outcome evaluation

21. To plan, resource, and implement long term outcome evaluation of FAIP. The development and use of the proposed screening tool may also be included as part of this project.

APPENDIX A

PREVENTION & INTERVENTION STRATEGIES FOR CHILDREN, ADOLESCENTS & ADULTS WHO DELIBERATELY LIGHT FIRES: PROGRAMME DIRECTOR SURVEY

The Contestable Research Fund from the New Zealand Fire Commission is sponsoring the University of Auckland (Samantha Haines and Dr Ian Lambie) to conduct a survey of International prevention/intervention programmes for people who deliberately light fires. The information from this survey will be disseminated in the hope of enhancing practice, policy, research and legislation in this area.

A copy of the report provided to the New Zealand Fire Service can be accessed from the New Zealand Fire Service website from 2007: http://www.fire.org.nz

- If you are involved with more than one programme, please complete one survey for each programme. If you are not currently involved in a specific fire setting programme, please complete the survey on the basis of your experience with programmes in the past.
- Please answer as many questions as you can. If questions do not apply to your experience, please indicate this where possible.
- The researcher(s) can telephone/email you to discuss any questions that are unclear or that you would prefer to answer verbally.
- In completing the survey, please refer to any programme documentation or other staff necessary to provide as accurate information as possible. Feel free to attach any relevant documentation and to make qualifications or additional comments on this form.
- All survey items relate specifically to deliberate fire setting, unless stipulated.
- Where appropriate complete survey items with reference to the last THREE years of programme operation or the full period of time since implementation, if your programme has been operating for less than three years.

The researchers would like to thank Dr David Kolko, Irene Pinsonneault and Judy Okulitch for allowing us to borrow from their 'Juvenile firesetter intervention program survey'[1]

Note: From *Juvenile firesetter intervention program survey* by D. D. Kolko, I. L. Pinsonneault and J. Okulitch, 1999, Pittsburgh, PA: University of Pittsburgh School of Medicine. Adapted with permission.

A. PARTICIPANT BACKGROUND

Name of prevention/intervention programme:

Name of agency/service the programme is part of:

Telephone number of programme *(include country & area code)*:

Website address:

Postal address of programme:

Your first name: Your last name:

I give permission for the Researchers to contact me for further information relating to this survey *(check the best answer):* ☐Yes ☐No

(i) If you checked 'Yes', please complete the following questions:

Preferred contact telephone number:

Preferred email address:

Your job title in the programme:

Are you *(check the best answer):* ☐Full-Time ☐Part-Time ☐Volunteer ☐Consultant

Your professional title/training:

Number of years/months you have been with the programme:

B. STAFF CHARACTERISTICS

B1. State the total number of staff currently involved in the programme *(for each category):*

Full-time Part-time Volunteer Consultant

B2. Briefly describe the organisational hierarchy and ethos:

B3. What professional disciplines do the clinical staff represent? *(check all that apply)*

☐Fire Service ☐Law Enforcement ☐Juvenile Justice

☐Social Service ☐Community Agencies ☐Red Cross

☐Psychologist ☐Psychiatrist ☐Psychotherapist

☐Forensic Nurse ☐Other (please specify)

B4. What *staff characteristics* are important for the success of your programme?

B5. What challenges to *staff morale* have arisen and how were they addressed?

B6. What ***training*** is offered to programme staff that is relevant to deliberate fire setting?

C. PROGRAMME CONTEXT

C1. Has the programme been implemented at more than one location?

(check the best answer) ☐Yes ☐No

If you checked 'Yes':

(i) what are the geographical locations?

(ii) Are there any significant differences in programme operation and delivery?

(iii) In your opinion, would the programme have the same success if it operated from one location only? *(check the best answer)* ☐Yes ☐No

If you checked 'No', Briefly elaborate on why the programme has not been implemented at more than one location:

C2. How does the location of the programme impact its delivery and success?

C3. What is the community and locale of your programme like in general?

C4. What are the physical surroundings of your programme site (e.g., location, privacy, comfort, problems)?

C5. Do you believe the physical surroundings of your programme site contributes to the success of your programme? (check the best answer) ☐Yes ☐No

D. PROGRAMME BACKGROUND

D1. Please state the number of years the programme has been in existence (or months if the programme has been operating for less than one year):

D2. Describe how programme got started?

D3. What individuals or groups were instrumental in getting the programme off the ground? And in what ways?

D4. What individuals or groups opposed the programme or have been critical of it in the past? And how did you overcome this?

D5. What specific needs guided programme development?

D6. How were these 'needs' determined?

D7. What inter-agency partnerships/stakeholders help you to address the issue of fire setting in your programme? *(check all that apply)*

☐Private Psychologist/Psychiatrist/Psychotherapist ☐State Social Services

☐Private Corporations ☐School Systems

☐Early Intervention Programmes ☐Juvenile Court

☐Affiliated Mental Health Professionals ☐Other *(please specify)*

(i) List the names of the agencies/services you have formalised partnership arrangements with:

D8. Does your programme have a written set of protocols describing the organisational structure of your relationship? *(check the best answer)* ☐Yes ☐No

D9. Has inter-agency cooperation been a difficult goal to achieve in addressing the issue of fire setting? *(check the best answer)* ☐Yes ☐No

(i) If you checked Yes', why? *(check all that apply)*

☐Different philosophies about how to address the problem

☐Members of different agencies can't seem to find a way to work together

☐Agencies don't seem to think that fire setting is an issue worth addressing

☐There is not enough awareness of the issue to bring people together on the problem

☐Other *(please specify)*

(ii) What is the most important aspect of this problem that needs to be addressed (i.e., highest priority)?

D10. What do you think contributes to a successful multi-agency response to deliberate fire setting?

D11. Can you think of other agencies that your programme should be networking with? *(check the best answer)* ☐Yes ☐No

If you checked 'Yes':

(i) List the other agencies your programme should be networking with:

(ii) List the current barriers to networking between your programme and the identified agencies:

(iii) State the benefits of your programme networking with the identified agencies:

D12. Please pick a number from the scale below to show the extent that these policies and practices have operated in the programme. Once you have picked a number, please write it in the space in front of each item *(please answer all items)*.

Not at all	Sometimes	Always
1	2	3

A written policy on intervention for deliberate fire setting

Clear programme goals and objectives

A designated staff person (or persons) who are responsible for cases involving deliberate fire setting

A policy on working with other agencies that also deal with deliberate fire setting

Procedures for *assessment* of clients who have deliberately lit fires

Procedures for *intervention* with clients who have deliberately lit fires

Procedures for *referral to* your service for clients who have deliberately lit fires

Procedures for *referral from* your service for clients who have deliberately lit fires

A policy on matching clients to staff (e.g., on gender, age)

A policy on programme delivery to meet the needs of different clients (e.g., learning disabilities, minority groups)

A policy on internal clinical supervision for programme staff

A policy on external professional supervision for programme staff

A policy on peer supervision for programme staff

A policy on cultural supervision for staff working with clients from other cultures

A policy on involving the clients family in treatment

Please list other policies and practices you believe are important and write a number from the scale above to show the extent that they currently operate in your programme:

Any other comments

D13. Please pick a number from the scale below to show the extent that the following factors have impacted on programme performance. Once you have picked a number please write it in the space in from of each item *(please answer all items).*

Not at all	Sometimes	Always
1	3	5

Referral procedures	Organisational support
Admission Criteria	Follow-up support
Availability of resources	Staff conflicts
Lack of funding	High staff turnover

Allocation of resources
Agency co-ordination
Quality of resources
Inter-agency communication
Staff training
Cultural processes
Communication between staff

Please list other factors you believe *'Always'* impact programme performance:

E. CLIENT BACKGROUND

E1. Was the programme originally designed specifically to address fire setting?
(check the best answer) ☐Yes ☐No

E2. Does the programme currently serve *only* those people who deliberately set fires?
(check the best answer) ☐Yes ☐No

If you checked 'No', What percentage (%) of the entire caseload in the programme, is made up of clients who have deliberately lit fires?

E3. Estimate the percentage (%) of your fire setting clients that are:

% Male % Female

E4. Estimate the percentage (%) of your fire setting clients according to socioeconomic status:

% Low SES % Medium SES % High SES

E5. Estimate the percentage of your fire setting clients that identify their ethnicity as:

% NZ European/Pakeha % English % Scottish
% Welsh % Irish % NZ Maori
% Pacific Island % South East Asian % Chinese
% Caucasian American % Middle Eastern % African
% Latin American/Hispanic % Asian/Hispanic
% Indian % African American
% Other European *(specify)* % Other Asian *(specify)* % Other *(specify)*

E6. What services does your programme provide for people who have deliberately lit fires? *(check all that apply)*

Referral Service
Assessment Service
Psychological Treatment Service
Education

Other Services *(please specify types of services)*

E7. Please state the total number of people ***referred*** to your programme (i.e., seen for interviews, services, and/or referrals) ***primarily for deliberately lighting fires*** in the following age groups*:*

No information available
Less than 7 years old
Between 7 and 13 years old
Between 14 and 16 years old
Between 17 and 25 years old
Older than 25 years old
Overall number of people referred (no age breakdown is available)

(i) The information above (question E7) is based on: *(check the best answer)*

☐Programme Documentation ☐An estimation

E8. Please state the total number of your clients who have deliberately set fires (self-report or conviction) but were ***referred*** to your programme ***for other reasons***, in the following age groups:

No information on age available
Less than 7 years old
Between 7 and 13 years old
Between 14 and 16 years old
Between 17 and 25 years
Older than 25 years old
Overall number of people referred (no age breakdown is available)
None, all referred primarily for deliberately lighting fires

(i) The information above (question E8) is based on: *(check the best answer)*

☐Programme Documentation ☐An estimation

E9. What percentage (%) of your clients had deliberately set more than one fire before being referred to your programme?

E10. What percentage (%) of your clients have been involved with another fire setting prevention/intervention service at some stage in the past? *(state if unknown)*

E11. What percentage (%) of the fires reported to you/the programme were set in the following locations:

% Home/Residence
% Community Building (e.g., Church)
% Accommodation (e.g., Hostel)
% Factory/Commercial Property
% Schools
% Vegetation
% Rubbish
% Mobile Property (e.g., Car)
% Other *(please specify)*

(i) The information above (question E11) is based on: *(check the best answer)*

☐Programme Documentation ☐An estimation

E12. What percentage (%) of fires were reported to the Fire Service and investigated by law enforcement and/or the Fire Service (e.g., cause and origin of fire?)

E13. Estimate the severity of the fires reported to the programme/you in each of these categories: *(%s should add to 100)*

% No Damage

% Minor Damage (e.g., matchplay, small objects burned)

% Moderate Damage (e.g., some property or possessions burned, furniture)

% Serious/Major Fire (e.g., structural damage)

E14. What age group is responsible for lighting the Serious/Major Fires ***most often***? *(check the best answer)*

Less than 7 years old | Between 7 and 13 years old

Between 14 and 16 years old | Between 17 and 25 years

Older than 25 years old

(i) The information above (question E14) is based on: *(check the best answer)*

☐ Programme Documentation ☐ An estimation

E15. Have there been any clients ***referred back*** to your programme after deliberately lighting another fire? *(check the best answer)* ☐ Unknown ☐ Yes ☐ No

E16. What percentage of your clients have been ***referred back*** to your programme after deliberately lighting another fire(s)?

Less than 7 years old | Between 7 and 13 years old

Between 14 and 16 years old | Between 17 and 25 years

Older than 25 years old

(i) The information above (question E16) is based on: *(check the best answer)*

☐ Programme Documentation ☐ An estimation

(ii) In general, how soon after contact with your programme ended did most of them continue (i.e., repeat) setting fires? *(check the best answer)*

☐ By 3 months ☐ By 6 months ☐ By 1 Year ☐ More than 1 year

(iii) Was the time frame significantly different according to age group? *(check the best answer)* ☐ Yes ☐ No

If you checked 'Yes', please elaborate on any significant differences:

(iv) In general, why do you think these clients began to set fires again?

E17. What percentage (%) have set another fire, but did not return to you/programme?

Unknown | Less than 7 years old

Between 7 and 13 years old | Between 14 and 16 years old

Between 17 and 25 years | Older than 25 years old

No information on age available (please provide overall estimate)

(i) The information above (question E17) is based on: *(check the best answer)*

☐Programme Documentation ☐An estimation

E18. Does your programme routinely conduct a formal follow-up of cases to whom you provided services? *(check the best answer)* ☐Yes ☐No

If you checked 'Yes':

(i) What is involved in the follow-up (i.e., what is the follow-up)?

(ii) How long after the end of treatment is the follow-up conducted?

F. PROGRAMME IMPLEMENTATION

F1. Was the program implemented as planned? *(check the best answer)* ☐Yes ☐No

If you checked 'No', please answer the following questions:

(i) Why not?

(ii) What changes were made?

(iii) With hindsight, did these changes contribute to the success of the programme?

F2. What aspects of implementation, if any, involved meeting legal mandates?

F3. What problems did the programme encounter during implementation and how could they have been avoided?

F4. Have some programme components been dropped or modified?

(check the best answer) ☐Yes ☐No

If you checked 'Yes', please expand on what components have been dropped or modified and why:

F5. List the programme materials relevant for deliberate fire setting treatment produced in-house:

F6. If special materials have been developed for your programme, are they available for duplication? *(check the best answer)* ☐Yes ☐No

F7. List the essential programme materials relevant for deliberate fire setting that were obtained from outside sources (include the source):

F8. What evaluation procedures has the programme established for reviewing the effectiveness of different materials, if any?

F9. Are any major changes in the programme anticipated for the near future? *(please specify)*

G. PROGRAMME RATIONALE AND OBJECTIVES

G1. Is there a written rational for the programme?

(check the best answer) ☐Yes ☐No

If you checked 'Yes', what is it?

If you checked 'No', please answer the following questions:

(i) What is the implicit rationale behind the programme?

(ii) How are staff and clients made aware of the rationale, if at all?

G2. Was programme development based on theory or practical experience with fire setting?

G3. What was the programme designed to accomplish?

G4. What underlying goals and objectives goals were set? And by whom?

Goals: Objectives:

G5. How were these goals and objectives selected?

G6. Are these underlying goals and objectives written in programme documentation?

(*check the best answer)* ☐Yes ☐No

G7. Which goals and objectives are most important? And why?

G8. Since the programme has been implemented, have the goals and objectives of the programme changed? *(check the best answer)* ☐Yes ☐No

If you checked 'Yes', in what ways have they changed?

G9. To what extent are these goals and objectives being met?

Goals: Objectives:

G10. How are the attainment of programme goals and objectives measured?

Goals: Objectives:

G11. What are the areas in which the program is most seriously failing to achieve its stated goals and objectives? And why?

Goals: Objectives:

G12. What are the areas in which the program is most successfully achieving its stated goals and objectives? And why? Goals: Objectives:

G13. What adjustments in the programme might lead to better attainment of goals and objectives?

G14. What adjustments in programme management and support (e.g., staff development, incentives) are needed?

H. SYSTEMATIC CHANGE

H1. What organisational policies or legislation have changed or are changing as a result of this programme?

H2. How has the behaviour of key stakeholders at an administrative and implementation level changed as a result of this program?

H3. What strategies have been most effective for actively involving ALL stakeholders in implementation and decision-making?

H4. Is your programme involved in raising professional or public awareness?

(check the best answer) ☐Yes ☐No

If you checked 'Yes', please elaborate on the methods you use to raise awareness (eg., published brochures, media coverage) and their perceived effectiveness:

I. BUDGET AND ADMINISTRATIVE ARRANGEMENTS

I1. Approximately, what is the annual budget for the programme? *(check the best answer)*

☐Less than 20,000
☐20,000 – 50,000
☐50,000 – 100,000
☐100,000 – 200,000
☐200,000 – 500,000
☐500,000 – 800,000
☐800,000 – 1 million
☐1 million – 1.5 million
☐More than 1.5 million

I2. How are funds being used compared to initial expectations?

I3. What are the major cost items? *(check all that apply)*

- ☐ Staff salaries/wages
- ☐ Staff overtime
- ☐ Personnel training
- ☐ Premises/Facilities
- ☐ Equipment
- ☐ Travel
- ☐ Publicity
- ☐ Materials
- ☐ Specialist supervision
- ☐ Other *(please specify)*

I4. Estimate the total ***initial start-up cost*** (e.g., development of project plan, recruitment, etc) of the programme:

I5. What were the major cost items during start-up?

I6. Were there any costs incurred that were unexpected? *(please specify)*

I7. From what sources have programme funds been obtained?

I8. What proportion of programme costs consists of monies that would have been spent anyway?

I9. What proportion of monies is made up of funds specifically granted for operating the programme?

I10. What changes in funding sources and cost trends have occurred since the programme has been running?

I11. Where can efficiencies be made in the programmes general running costs?

J. PROGRAMME DATA

J1. Does the programme assess local arson problems?

(check the best answer) ☐ Yes ☐ No

If you checked 'Yes', briefly describe the methods used to assess local arson problems:

J2. What statistical data does the programme collect about deliberately lit fires and the people that light them?

J3. What instruments do you use to collect your data?

J4. What limitations or deficiencies are there in the instruments used?

J5. What processes or procedures are used to collect the data (i.e., what are the steps in the process)?

J6. What limitations are there with current data collection processes/procedures?

J7. Is data collected on the distribution of deliberately lit fires across building types?
(specify building types)

J8. Is data collected on the distribution of deliberately lit fires across regions or communities?
(check the best answer) ☐Yes ☐No

J9. Do you collect information on the monetary losses incurred as a result of deliberately lit fires?
(check the best answer) ☐Yes ☐No

If you checked 'Yes', please answer the following questions:

(i) What has been the total monetary loss incurred, since you have been collecting the data? *(please specify dates)*

(ii) What are the figures for monetary loss as a result of deliberately lit fires compared with other fires?

(iii) How is the monetary loss for deliberately lit fires assessed?

If you checked 'No', please answer the following questions:

(i) Estimate the total monetary loss incurred, for the last three years?

(ii) Estimate the total monetary loss due to clients in the following age-groups, for the last three years:

Less than 7 years old Between 7 and 13 years old

Between 14 and 16 years old Between 17 and 25 years

Older than 25 years old No age break down available

(iii). Estimate the total monetary loss as a result of deliberately lit fires compared with other fires, over the last three years:

J10. For what purposes is your statistical data collected?

J11. Does the programme measure outcome or programme effectiveness? (e.g., reduction of fires in locality, re-referrals, rate of recidivism) (*check the best answer)* ☐Yes ☐No

If you checked 'Yes':

(i) List the ways outcome or programme effectiveness is measured (e.g., reduction of fires in locality, re-referrals, rate of recidivism)?

(ii) What has been the outcome of the programme, over the time you have been collecting data? *(please specify dates)*

Do you have any other comments for the field?

APPENDIX B

PREVENTION & INTERVENTION STRATEGIES FOR CHILDREN, ADOLESCENTS & ADULTS WHO DELIBERATELY LIGHT FIRES: PROGRAMME STAFF SURVEY

The Contestable Research Fund from the New Zealand Fire Commission is sponsoring the University of Auckland (Samantha Haines and Dr Ian Lambie) to conduct a survey of International prevention/intervention programmes for people who deliberately light fires. The information from this survey will be disseminated in the hope of enhancing practice, policy, research and legislation in this area. A copy of the report provided to the New Zealand Fire Service can be accessed from the New Zealand Fire Service website from 2007: http://www.fire.org.nz

- If you are involved with more than one programme, please complete one survey for each programme. If you are not involved in a specific fire setting programme, please complete the survey on the basis of your clinical experience with clients who deliberately lit fires.
- Please answer as many questions as you can. If questions do not apply to your experience, please indicate this where possible.
- The researcher(s) can telephone/email you to discuss any questions that are unclear or that you would prefer to answer verbally.
- In completing the survey, please refer to any programme documentation or other staff necessary to provide as accurate information as possible. Feel free to attach any relevant documentation and to make qualifications or additional comments on this form.
- All survey items relate specifically to deliberate fire setting, unless stipulated.
- Complete survey items with reference to the last THREE years of programme operation or the time you have been associated with the programme, if less than three years.

The researchers would like to thank Dr David Kolko, Irene Pinsonneault and Judy Okulitch for allowing us to borrow from their 'Juvenile firesetter intervention program survey'[1]

Note: From *Juvenile firesetter intervention program survey* by D. D. Kolko, I. L. Pinsonneault and J. Okulitch, 1999, Pittsburgh, PA: University of Pittsburgh School of Medicine. Adapted with permission.

A. PARTICIPANT BACKGROUND

Name of prevention/intervention programme:

Name of agency/service the programme is part of:

Telephone number of programme *(include country & area code)*:

Website address:

Postal address of programme:

Your first name:

Your last name:

I give permission for the Researchers to contact me for further information relating to this survey *(check the best answer):* ☐Yes ☐No

(i) If you checked 'Yes', please complete the following questions:

Preferred contact telephone number:

Preferred email address:

Your job title in the programme:

Are you *(check the best answer):* ☐Full-Time ☐Part-Time ☐Volunteer ☐Consultant

Your professional title/training:

Number of years/months you have been with the programme:

State the length of time you have been working within the area of fire setting *OR* the number of clients you have worked with:

B. PROGRAMME BACKGROUND

B1. Please pick a number from the scale below to show the extent that these practices have operated within the programme. Once you have picked a number, please write it in the space in front of each item *(please answer all items)*.

Not at all	Sometimes	Always
1	2	3

Intervention for deliberate fire setting according to programme policy

Staff follow programme goals and objectives in their practice

A designated staff person (or persons) who are responsible for cases involving deliberate fire setting

Working with other agencies that also deal with deliberate fire setting

Assessment of clients who have deliberately lit fires

Intervention with clients who have deliberately lit fires

Referral to your service for clients who have deliberately lit fires

Referral from your service for clients who have deliberately lit fires

Clients are matched to staff (e.g., on gender, age)

Programme delivery is varied to meet the needs of different clients (e.g., learning disabilities, minority groups)

Internal clinical supervision for programme staff

External professional supervision for programme staff

Peer supervision for programme staff

Cultural supervision for staff working with clients from other cultures

Family are involved in clients treatment

Please list other policies and practices you believe are important and write a number from the scale above to show the extent that they operate in your programme:

Any other comments regarding the policies and practices within your programme?

B2. Please pick a number from the scale below to show the extent that the following factors have impacted on programme performance. Once you have picked a number, please write it in the space in from of each item *(please answer all items)*.

Not at all	Sometimes	Always
1	2	3

Referral procedures

Admission Criteria

Availability of resources

Lack of funding

Allocation of resources

Agency co-ordination

Quality of resources

Inter-agency communication

Organisational support

Follow-up support

Staff conflicts

High staff turnover

Staff training

Cultural processes

Communication between staff

Please list other factors you believe *'Always'* impact programme performance:

C. POPULATION

C1. Briefly describe any special characteristics of the population your programme serves (e.g., special needs, offenders):

C2. Estimate the age range of the population your programme serves (e.g., 7 to 16 years old; 17 years and older): *(state in years)*

C3. Estimate the percentage (%) of your adult fire setting clients (17 years and older) that were employed when they set the fire that led to their ***first referral*** to your programme:

C4. What percentage (%) of your fire setting clients have ever been given a psychiatric diagnosis?

% Less than 14 years old % Between 14 and 16 years old

% Between 17 and 25 years old % Older than 25 years old

% All age groups *(if no age breakdown is available)*

(i) The information above (question C4) is based on: *(check the best answer)*

☐Programme documentation ☐An estimation

C5. What are the most common psychiatric diagnosis given to your fire setting clients, in each age group?

Less than 14 years old: Between 14 and 16 years old:

Between 17 and 25 years old Older than 25 years old

All age groups (if no age breakdown is available)

(i) The information above (question C5) is based on: *(check the best answer)*

☐Programme documentation ☐An estimation

C6. Is programme attendance mandatory?

(check the best answer) ☐Yes ☐No

If you checked 'Yes': What criteria determine entry to the programme and exit from the programme?

If you checked 'No', answer the following questions:

(i) Estimate the average percentage (%) attendance for fire setting clients in your programme:

(ii) What do you believe motivates the fire setting clients to attend the programme?

C7. What percentage (%) of the fires set by your clients were primarily due to the following reasons?

% Curiosity/Experimentation % Anger

% Revenge
% Attraction/Interest
% Attention
% Mental Disorder
% Criminal (e.g., terrorism, conceal a crime)
% Other *(please specify)*
% Peer Pressure
% Boredom
% Financial Gain

(i) The information above (question C7) is based on: *(check the best answer)*

☐ Programme documentation ☐ An estimation

D. PROGRAMME SERVICES

D1. Type of programme: *(check the one category that best describes your programme)*

☐ Fire service based
☐ Inpatient mental health
☐ Youth justice
☐ Adult prison/probation
☐ Consultant Psychologist
☐ Consultant Psychotherapist
☐ Outpatient mental health
☐ Residential treatment
☐ Foster home
☐ Interagency network
☐ Consultant Psychiatrist
☐ Other *(please specify)*

D2. Is the programme specifically for people who deliberately light fires or part of a more general programme? *(check the best answer)*

☐ Specific fire setting programme ☐ Part of a general programme
☐ Other *(please specify):*

D3. List the types of agencies or professionals your programme receives referrals from: *(list most frequent first)*

D4. Briefly describe what the programme intends to do for the people it serves?

D5. What is different or unique about your programme, when compared with other programmes for people who deliberately light fires?

D6. What do you perceive the programmes key characteristics to be?

D7. What techniques are used to monitor or modify programme operations on a day-to-day basis?

D8. What is included in a typical week's schedule of activity for the programme participants (provide examples for each activity)?

D9. What unforeseen factors have affected the programme and as a result led to a change in how activities were scheduled or operated?

D10. What services would you like to see added to the programme?

D11. What services do you think are the most effective in reducing the incidence of deliberate fire setting? And why?

D12. What services do you think are the least effective in reducing the incidence of deliberate fire setting? And why?

D13. Please pick a number from the scale below to show the extent that the programme has provided the following services. Once you have picked a number, please write it in the space in front of each item *(please answer all items)*.

Not at all	Sometimes	Always
1	2	3

Interview client
Interview family members
Risk assessment
Full assessment (including fire setting and background)
Home visit by professional
Tour of firehouse and "show and tell"
A pre-test and post-test to measure effectiveness of fire safety training
Short meeting to provide fire safety education of discussion of the dangers of fire
A class on fire skills training
A series of classes on fire skills training
Victim mediation
A companion or "big-brother" type service
Brief (once/twice) counselling with client
Brief (once/twice) counselling with parents/family
Short-term (more than twice) counselling with client

D16. Please pick a number from the scale below to show the extent that the programme has used the following materials or procedures. Once you have picked a number, please write it in the space in front of each item *(please answer all items).*

Not at all	Sometimes	Always
1	2	3

United States Fire Administration / Federal Emergency Management Agency Parent and Child questionnaires to assess risk

Standardised questionnaire(s) to assess behavioural/emotional problems *(list ones used)*

Fire safety videos/DVDs

Photographs or other still images of fire damage (e.g., victims)

Visits to Hospital Burns Units

Practice in setting "controlled" fires or lighting matches

Special graphs showing a recent fire & events related to the fire

Teaching how to do home fire safety

Special restitution to repay damages

Community services related to fire prevention

Teaching fire science

Teaching safe and responsible use of fire

Role-plays

Homework tasks

Orgasmic reconditioning

Covert sensitisation

D17. What other materials/procedures does your programme routinely provide?

D18. What materials/procedures do you think are the most effective in reducing the incidence of deliberate fire setting? And why?

D19. What materials/procedure do you think are the least effective in reducing the incidence of deliberate fire setting? And why?

D20. What materials/procedures would you like to see added to the programme? And why?

D21. Do you have any other comments on the materials/procedures utilised by your programme?

D22. List the predominant treatment model(s) used in the programme:

D23. How effective have you found each of the predominant treatment models listed above?

D24. What treatment models or interventions would you like to see used more often?

And why?

D25. What treatment models or interventions do you think should be used less often?

And why?

D26. Does your programme address deliberate fire setting in particular building types (e.g., schools, warehouses, budget accommodation)

(check the best answer) ☐Yes ☐No

(i) If you checked 'Yes', how does the programme address the various building types?

E. FOLLOW UP STATUS

E1. Thinking back over your involvement with the programme, can you give an example of a client who has done particularly well? *(check the best answer)* ☐Yes ☐No

If you checked 'Yes': In your opinion, what were the programme factors that contributed to this client doing well?

E2. Can you give an example of a client who has not done well on the programme?

(check the best answer) ☐Yes ☐No

If you checked 'Yes': In your opinion, what were the programme factors that may have contributed to this outcome?

E3. If the programme were successful, what would you expect to see happening?

E4. How successful has the programme been over the last year?

E5. In general, what critical programme factors contribute to successful treatment outcomes? And why?

E6. Similarly, what programme factors contribute to poorer outcomes?

E7. What else should be done to discourage further fire setting (that isn't part of your programme)?

F. CULTURAL SERVICES

F1. Please pick a number from the scale below to show the extent that each statement has occurred in the programme. Once you have picked a number, please write it in the space in front of each item *(please answer all items).*

Not at all	Sometimes	Always
1	2	3

Meeting the cultural needs of its clients is a programme priority

A specialist cultural assessment of programme clients is conducted

Culture is considered when conducting an intervention

A cultural advisor is available for programme staff

Programme staff consider culture in their work

Consideration of cultural issues by programme staff benefits the client

Clients are matched to staff according to culture

F2. What are the arrangements for cultural supervision in your programme?

F3. Do you have any suggestions for improving these arrangements?

F4. How does the programme meet the needs of clients from ethnic minorities?

F5. Do you have any suggestions for improving these arrangements?

F6. Do you have any other comments about the cultural services of your programme?

G. PROGRAMME RESOURCES AND STRUCTURES

G1. What role(s) do you believe professionals in the psychological/psychiatric communities could play in your programme?

G2. What current resources help to enhance your programme's effectiveness?

G3. What do you think are the barriers to treatment for the following client groups:

Clients less than 17 years old — Clients 17 years and older

High risk clients — Other Clients

G4. Please describe how the barriers you identified could be removed:

Clients less than 17 years old — Clients 17 years and older

High risk clients — Other Clients

G5. Does the programme measure outcome or programme effectiveness? (e.g., reduction of fires in locality, re-referrals, rate of recidivism)

(check the best answer) ☐Yes ☐No

If you checked 'Yes':

(i) In what ways do you measure outcome?

(ii) What has been the outcome of the programme, over the time you have been collecting data? *(please specify dates)*

G6. To sum up, what's your overall assessment of the programme? *(check the best answer)*

☐Very poor ☐Poor ☐Fair ☐Good ☐Excellent ☐Other *(please specify)*

Do you have any other comments or suggestions for the field?

APPENDIX C

INTERNATIONAL APPROACHES TO REDUCING DELIBERATELY LIT FIRES INTERVIEW: THE PERCEPTION OF WHAT WORKS, FROM PEOPLE WHO HAVE DELIBERATELY LIT FIRES

Research identification number: .....

Date of interview: .....

Source agency: Department of Corrections : PPS / CPS

Gender of Participant: Male / Female

A. BACKGROUND OF PARTICIPANT

First, I would like to ask you some questions about yourself so that I get a few details about your background.

1. How old are you?
2. What ethnic group do you identify with?

(Prompt: NZ Maori (Iwi/Hapu)? NZ European/Pakeha, English, Scottish, Welsh, Irish, Pacific Island (specify), South East Asian, Chinese, Indian, Middle Eastern, African, Latin American/Hispanic, Other European (specify), Other Asian (specify), Other (specify)

B. BACKGROUND ON DELIBERATELY LIT FIRES

Now I would like to ask you a few questions about the fires you deliberately lit in the past, not those fires that were lit by accident, only those that you lit on purpose.

1. How old were you when you first set a fire deliberately?
2. What did you set fire to? *(Prompt: what object)*

3. Can you remember what motivated you to light that first fire? *(Prompt: Curiosity/Experimentation, Anger/Revenge, Peer Pressure, Boredom, Attraction/Interest, Attention, Financial Gain, Mental Disorder, Terrorism, Conceal a crime)*
4. Tell me a bit about what was going on for you then? *(Prompt: where did your motivation come from?)*
5. What happened after you set the fire / what were the consequences of lighting this fire?
6. Approximately, how many fires have you deliberately lit in your lifetime?
7. Who owned the things you set fire to? *(Prompt: Yourself, Parent, Stepparent, Sibling, Stepsibling, Relative, Neighbour, Friend, Peer, School, Church, Employer, Stranger, Govt Property, People, Other)*
8. What was your relationship like with those people when you set the fires?
9. What sort of plans did you make before setting the fires? And has this changed over time/your life?
10. How do you normally feel/think ***before*** you light a fire?
    Feel: *Think:*
11. How do you normally feel/think ***while*** you are lighting a fire?
    Feel: *Think:*
12. How do you normally feel/think ***after*** you have lit the fire?
    Feel: *Think:*
13. What do you normally do:
    before you set a fire? while you're setting a fire? after you have set a fire?
14. Can you remember what the consequences have usually been for lighting fires, including the first fire you ever deliberately lit? *(Prompt: didn't get caught, charged, convicted, fame)*
15. How many times have the fires got out of control? *(Prompt: got bigger than you anticipated)*
16. Has anyone ever been injured by a fire you have set? If yes, did the person require medical attention, hospitalisation or were they fatal? Was this the outcome you intended?
17. What do you think might have stopped you from lighting fires?.....
18. Do you normally set fires on you own or with other people?
19. Why do you think you light fires? *(prompt: why do you choose fire as opposed to something else)*
20. Do you think there is any pattern in your fire setting?
21. How often do you think about setting fires? *(Prompt: All the time, Daily, Weekly, Monthly, 6 Monthly, Almost never, Never)*

C. MOST RECENT DELIBERATELY LIT FIRE

Now I would like to ask you a few questions about the last time you deliberately lit a fire:

1. How old were you when you last set a fire deliberately? How long ago was this?
2. Why do you believe you set this fire? *(Prompt: Curiosity/Experimentation, Anger, Revenge, Peer Pressure, Boredom, Attraction/Interest, Attention, Financial Gain, Mental Disorder, Terrorism, Conceal a crime)*
3. Tell me a bit about what was going on for you then? *(Prompt: where your motivation was coming from)*
4. What did you set fire to? *(Prompt: what object, e.g. car, house)*
5. What made you set fire to that particular object, instead of another object?
6. Approximately, what was the value of the object set alight?
7. What do think might have stopped you from setting fire to this particular object?
8. Who did this object belong to and did this have anything to do with why you set fire to it?
9. How did you think/feel ***before*** you lit this fire?

   Feel: *Think:*
10. How did you think/feel ***while*** you were lighting the fire?

    Feel: *Think:*
11. How did you think/feel ***after*** you lit the fire?

    Feel: *Think:*
12. What did you do after you lit the fire?

    before you set a fire? while you're setting a fire? after you have set a fire?
13. What would have had to be different, for you not to have lit this fire?
14. What were the consequences for lighting this fire?
15. Were you in school or employed at the time you lit this fire?
16. At the time you lit this fire, whom were you living with?*(Prompt: Partner, Mother, Father, Other relatives, Caregiver/Foster, Flatmate(s), Alone, Other)*
17. Were you using alcohol or drugs at the time? (How much)
18. How often do you use alcohol or drugs before lighting fires? *(Prompt: Never, Sometimes, Often, Every time)*

19. Around the time of the last fire you set, how many fires were you lighting? *(Prompt: daily, weekly, monthly, yearly)*

D. PREVENTION / INTERVENTION PROGRAMMES

Now I would like to ask you some questions about preventing deliberately lit fires:

1. Have you ever had treatment for deliberately lighting fires? / Help to stop lighting fires?

   If 'No':

   (i) Have you ever wanted treatment?

   (ii) Have you ever tried to get help?

   If No, what stopped you?

   If Yes, when and what happened?

   (iii) Have you ever had any other sort of treatment/therapy?

   If 'Yes':

   (i) How many times?

   (ii) How old were you, each time?

   (iii) What type(s) of treatment programme? *(Prompt: Fire Service, Outpatient Mental Health, Inpatient Mental Health, Residential Treatment, Youth Detention/Facility, Foster Home, Prison)*

   (iv) Can you remember the name of the agency who delivered the treatment?

   (v) Were you ever given a diagnosis or label for what was going on for you that you can remember? *(If yes, what do you think about it)*

   (vi) What was involved in the treatment? *(Prompt: Education, Individual or group therapy, Skills training)*

   (vii) What parts of the treatment do you think helped you?

   (viii) What parts of the treatment do you think did not help at all?

   (ix) What kind of help do you think you need to stop lighting fires?

2. Do you have any other suggestions for helping people to stop deliberately lighting fires?

Once again, thank you for your time and participation.

APPENDIX D

THE UNIVERSITY SECRETARIAT
Office of the Vice-Chancellor
Research Ethics and Biological Safety Administration

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Auckland, New Zealand

UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE

23 September, 2005

MEMORANDUM TO:

Dr Ian Lambie

Psychology

Re: Change to application

I wish to advise you that the Committee met on 21 September , 2005 and reviewed the request for change to your application titled "International approaches to reducing deliberately lit fires" (Our Ref. 2005 / 334).

The Committee approved the change.

If the project changes significantly you are required to resubmit your appplication to the Committee for further consideration.

In order that an up-to-date record can be maintained, it would be appreciated if you could notify the Committee once your project is completed.

Please contact the Chairperson if you have any specific queries relating to your application. He and the members of the Committee would be most happy to discuss general matters relating to ethics provisions if you wish to do so.

Margaret Rotondo
Executive Secretary
University of Auckland Human Participants Ethics Committee

c.c. Head of Department, Psychology

Samantha Haines

1. All communications with the committee regarding this application should indicate this reference number - (2005/334).
2. At the end of the three years, or earlier if the project is completed, you are requested to advise the Committee of its completion.

3. Normally projects are approved for three years. Should you require an extension to your applications write to the UAHPEC giving full details.Extensions me be granted for up to 6 years in total, after which time you must make a new application.

4. Should you need to make and further changes to the project write to the UAHPEC giving full details including any appropriately revised accompanying documentation such as PISs and CFs.

5. Do not forget to fill in the 'approval wording' on the Participant Information Sheets and Consent Forms giving the dates of approval and the reference number before you send them out to your subjects

Note: Approval of this change does not constitute an extension of the project approval period.

APPENDIX E

PARTICIPANT INFORMATION SHEET

International approaches to preventing deliberately lit fires.

Invitation

To the Chief Executive Officer, Director or Manager of prevention/intervention programmes for people who deliberately light fires.

We would like to invite your staff to be part of a research study run by the Psychology Department of the University of Auckland, with support from the New Zealand Fire Service.

Who is organising the study?

The study has been organised by people from the Psychology Department at the University of Auckland and is sponsored by the New Zealand Fire Service. The researchers involved are Samantha Haines, who is a Clinical Psychology Doctorate student at the University of Auckland and Dr Ian Lambie, who is the Director of the Clinical Psychology programme at the University of Auckland.

What is this study about?

This study has two main objectives:

(i) To explore the implementation and operation of International prevention/intervention programmes for people who deliberately light fires.

(ii) To explore the statistical data and data systems used internationally to collect, store or report information on deliberately lit fires.

From this exploration we will extrapolate International 'best practice', which will be disseminated in the hope of enhancing current practice, policy and legislation in the area. A copy of the final report can be downloaded in 2007, from the official website of the New Zealand Fire Service (http://www.fire.org.nz).

Participation in this study

Participants were purposively chosen for their expert knowledge in area of deliberate fire setting:

(i) Prevention/intervention programme directors and programme staff

While it may be possible to collect information from the literature and programme documentation these do not tell the whole story. Therefore, it is important to learn from the experience and insight of people who work within the area of deliberate fire setting.

Giving consent for your staff to participate in this study means that their participation will not affect their employment within your organisation or their relationship with you as their employer. Participation in this study is voluntary. Participants who decide to take part in this study can pull out at any time and withdraw

their data without giving reasons up until 1 June 2006, Participants do not have to answer all the questions; they may stop the interview at any time and /or decide not to return their questionnaire.

What does this study involve doing?

After the researchers have received written consent that your staff can take part in this study, staff will be given information about the study and also asked to provide written consent to participate.

This study involves filling out one or both questionnaires, if you are a programme director who is also involved in delivering the programme content to clients. For some people it will also involve providing additional detail to their responses (e.g., clarification of the information provided) via email, telephone or face to face contact with the researchers. The questionnaires give the option of providing your contact details so that the researchers can collect additional information they believe will enrich the study. This is purely voluntary and all contact details will be kept under lock and key and be accessed by the researchers only.

The questionnaire entitled 'Prevention and intervention strategies for children, adolescents and adults who deliberately light fires: Survey of programme staff', will take approximately 45 minutes to complete. This questionnaire explores staff perceptions of the programme, including strengths and weaknesses, in order to further develop effective prevention/intervention strategies within New Zealand.

The questionnaire entitled 'Prevention and intervention strategies for children, adolescents and adults who deliberately light fires: Programme coordinator/director survey', will take approximately 45 minutes to complete. This questionnaire explores perceptions of the programme and asks for more detailed documentation based data about the operation of the programme. The purpose of this is to inform the implementation and operation of successful prevention/intervention initiatives within New Zealand.

Any additional discussion undertaken directly with the researcher(s) may take anywhere between 10 and 20 minutes, depending on the richness of detail required.

What happens to participant information?

All completed questionnaires can be returned directly to the researchers. All information is kept under lock and key at the University of Auckland for a period of six years after which the data will be destroyed by wiping floppy/compact disks and shredding data sheets. Only the researcher will have access to this information. Anonymity on the web based survey can be guaranteed to the extent that Secure Sockets Layer (SSL) encryption is used. SSL is a protocol developed by Netscape for transmitting private documents via the Internet. It uses a cryptographic system that uses two keys to encrypt data − a public key known to everyone and a private or secret key known only to the recipient of the message. All information from the web based survey will be extracted by the researcher. No information that could personally identify participants will be used in any discussion, reports or publications about the study.

What if I have questions about the study?

If you wish to know more about the study or discuss your participation, feel free to contact:

- Samantha Haines, s.haines@xtra.co.nz, telephone/facsimile (07) 839 3803, telephone (09) 373 7599 extension 86755 or 021 422 421.
- Dr Ian Lambie, i.lambie@auckland.ac.nz, telephone (09) 373 7599 extension 85012.

- The Head of the Psychology Department is Associate Professor Fred Seymour, f.seymour@auckland.ac.nz, telephone 09 373 7599 extension 88414.
- Samantha Haines, Dr Ian Lambie and Associate Professor Fred Seymour can also be contacted by mail to the Psychology Department, University of Auckland, Private Bag 92019, Auckland, New Zealand or by facsimile on (09) 373 7450.

Ethical approval

This study has received ethical approval from the University of Auckland Human Participants Ethics Committee on 21/09/2005 for a period of 3 years, from 21/09/2005. Reference no. 2005 / 334.

If you have any concerns of an ethical nature contact: The Chair, The University of Auckland Human Participants Ethics Committee, Office of the Vice Chancellor, Research Office, Level 2, 76 Symonds Street, Auckland. Telephone: 373-7599 extension 87830.

CONSENT FORM

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF SIX YEARS

International approaches to preventing deliberately lit fires.

Researchers

Samantha Haines and Dr Ian Lambie from the Psychology Department of the University of Auckland and sponsored by the New Zealand Fire Service.

To

The Chief Executive Officer, Director or Manager of prevention/intervention programmes for people who deliberately light fires.

Please read the following statements

- I have read and understood the Participant Information Sheet.
- I have had the opportunity to discuss this study with the researchers and I am satisfied with the answers I have been given.
- I give permission for the researchers to access employees of my programme/organisation.
- I guarantee that participation or non-participation of employees will not affect their employment in any way.
- I will give all staff the opportunity of taking part in this study and will pass on the participant information sheets, consent forms and questionnaires provided by the researchers.
- I understand that participation in the study is voluntary.
- I understand that participants can withdraw their data up until 1 June 2006.
- I understand that the data will be kept under lock and key at the University of Auckland, separate from the consent forms, for a period of six years after which it will be destroyed.
- I understand that the information from this study will be presented to the New Zealand Fire Service in report format and may be published in academic journals and other outlets considered suitable by the researchers.
- I understand that if the information provided is reported or published, it will be done in a way that does not identify any individual as its source.

Please sign the consent form below if you give permission for your employees to take part in this research

Date: Programme Name: Name: Signature:

Ethical approval

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PARTICIPANT INFORMATION SHEET

International approaches to preventing deliberately lit fires.

Invitation

To the staff of prevention/intervention programmes for people who deliberately light fires.

We would like to invite you to be part of a research study run by the Psychology Department of the University of Auckland, with support from the New Zealand Fire Service.

Who is organising the study?

The study has been organised by people from the Psychology Department at the University of Auckland and is sponsored by the New Zealand Fire Service. The researchers involved are Samantha Haines, who is a Clinical Psychology Doctorate student at the University of Auckland and Dr Ian Lambie, who is the Director of the Clinical Psychology programme at the University of Auckland.

What is this study about?

This study has two main objectives:

(iii) To explore the implementation and operation of International prevention/intervention programmes for people who deliberately light fires.

(iv) To explore the statistical data and data systems used internationally to collect, store or report information on deliberately lit fires.

From this exploration we will extrapolate International 'best practice', which will be disseminated in the hope of enhancing current practice, policy and legislation in the area. A copy of the final report can be downloaded in 2007, from the official website of the New Zealand Fire Service (http://www.fire.org.nz).

Participation in this study

Participants were purposively chosen for their expert knowledge in area of deliberate fire setting:

(ii) Prevention/intervention programme directors and programme staff

While it may be possible to collect information from the literature and programme documentation these do not tell the whole story and it is important that people such as yourself are surveyed to gain from your experience and insight.

Permission to participate in this study has been granted by your employer and they have guaranteed that if you take part in this study or choose not to, it will not affect your employ within your organisation or your relationship with your employer. Participation in this study is voluntary. If you decide you do not want to take part in this study you can pull out at any time and withdraw your data without giving reasons, up until 1 June 2006. Participants who decide to take part do not have to answer all the questions; you may stop the interview at any time and /or decide not to return your questionnaire.

What does this study involve doing?

This study involves filling out one or both questionnaires, if you are a programme director who is also involved in delivering the programme content to clients. For some people it will also involve providing additional detail to their responses (e.g., clarification of the information provided) via email, telephone or face to face contact with the researchers. The questionnaires give you the option of providing your contact details so that the researchers can contact you for this additional information they believe will enrich the study. This is purely voluntary and your contact details will be kept under lock and key and be accessed by the researchers only. After the researchers have received your written consent to participate in the study, the questionnaires can be completed in three different ways: online by accessing a website address the researchers will provide; via a MS Word document that the researchers can email to you; or by pen and paper. Completed questionnaires can be returned to the researchers via email or postal mail. The researchers are also happy to conduct the questionnaires entirely as a telephone interview, if you would prefer. The accompanying consent form asks you to choose how you intend to complete and return the questionnaires, so the researchers can organise this for you.

The questionnaire entitled 'Prevention and intervention strategies for children, adolescents and adults who deliberately light fires: Survey of programme staff'', will take approximately 45 minutes to complete. This questionnaire explores staff perceptions of the programme, including strengths and weaknesses, in order to further develop effective prevention/intervention strategies within New Zealand.

The questionnaire entitled 'Prevention and intervention strategies for children, adolescents and adults who deliberately light fires: Programme coordinator/director survey', will take approximately 45 minutes to complete. This questionnaire explores perceptions of the programme and asks for more detailed documentation based data about the operation of the programme. The purpose of this is to inform the implementation and operation of successful prevention/intervention initiatives within New Zealand.

Any additional discussion undertaken directly with the researcher(s) may take anywhere between 10 and 20 minutes, depending on the richness of detail required.

A reminder letter will be sent out to participants three weeks after giving consent and then again after a following two weeks. Those participants who have already completed the questionnaire should ignore the reminder letters.

What happens to information about me?

All completed questionnaires can be returned directly to the researchers. All information is kept under lock and key at the University of Auckland for a period of six years after which the data will be destroyed by wiping floppy/compact disks and shredding data sheets. Only the researcher will have access to this information. Anonymity on the web based survey can be guaranteed to the extent that Secure Sockets Layer (SSL) encryption is used. SSL is a protocol developed by Netscape for transmitting private documents via the Internet. It uses a cryptographic system that uses two keys to encrypt data − a public key known to everyone and a private or secret key known only to the recipient of the message. All information from the web based survey will be extracted by the researcher. No information that could personally identify you will be used in any discussion, reports or publications about the study.

What if I have questions about the study?

If you wish to know more about the study or discuss your participation, feel free to contact:

- Samantha Haines, s.haines@xtra.co.nz, telephone/facsimile (07) 839 3803, telephone (09) 373 7599 extension 86755 or 021 422 421
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- The Head of the Psychology Department is Associate Professor Fred Seymour, f.seymour@auckland.ac.nz, telephone 09 373 7599 extension 88414.
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CONSENT FORM

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF SIX YEARS

International approaches to preventing deliberately lit fires.

Researchers

Samantha Haines and Dr Ian Lambie from the Psychology Department of the University of Auckland and sponsored by the New Zealand Fire Service.

To

The staff of prevention/intervention programmes for people who deliberately light fires.

Please read the following statements and sign the consent form if you agree to take part in this research

- I have read and understood the Participant Information Sheet.
- I have had the opportunity to discuss this study with the researchers and I am satisfied with the answers I have been given.
- I understand that participation in the study is voluntary.
- I understand that I can withdraw my participation and my data up to 1 June 2006.
- I understand that the data will be kept under lock and key at the University of Auckland, separate from the consent forms, for a period of six years after which it will be destroyed.
- I understand that the information from this study will be presented to the New Zealand Fire Service in report format and may be published in academic journals and other outlets considered suitable by the researchers.
- I understand that if the information provided is reported or published, it will be done in a way that does not identify any individual as its source.
- I understand my employer has given permission for me to participate in this study.
- I understand that my employer has guaranteed that my participation in this study will not affect my employment or my relationship with my employer.
- I agree to take part in this research.

Date:

Programme Name:

Name:

Signature:

_____Please email me the website link so I can complete the questionnaire online

_____Please email me the questionnaire as a MS Word document *(please specify an alternative format if required)* so I can: complete it on my computer and return it via email OR print it out, complete it and return it in a self-addressed envelope *(circle relevant option)*

_____I would like to complete the entire questionnaire as a telephone interview

Please specify your email address and/or your postal address according to your chosen option:

Ethical approval

This study has received ethical approval from the University of Auckland Human Participants Ethics Committee on 21/09/2005 for a period of 3 years, from 21/09 /2005. Reference no. 2005 / 334.

APPENDIX F

PARTICIPANT INFORMATION SHEET

International approaches to preventing deliberately lit fires.

Invitation

To adults who have had five or more arson related convictions in their lifetime.

We would like to invite you to be part of a research study run by the Psychology Department of the University of Auckland, with support from the New Zealand Fire Service.

Who is organising the study?

The study has been organised by people from the Psychology Department at the University of Auckland and is funded by the New Zealand Fire Service. The researchers involved are Samantha Haines, who is a Clinical Psychology Doctorate student at the University of Auckland and Dr Ian Lambie, who is the Director of the Clinical Psychology programme at the University of Auckland.

What is this study about?

We are doing this study in order to learn how to help people stop deliberately lighting fires. We are asking people involved in treatment programmes internationally about what they believe is helpful and by also talking to you about your past experiences (e.g., what you found useful and what has not been so useful) we will be able to identify better ways of helping people in the future.

Who are the participants in this study?

To be a participant in this study you must have five or more arson related convictions. Participation in this study is voluntary, you do not have to take part and you can pull out without giving reasons and withdraw the information collected from your interview up until 1 June 2006.

What does this study involve doing?

This study involves taking part in a face to face interview, which will take approximately 90 minutes. The interview is about your own history of deliberately lighting fires, how to prevent deliberately lit fires and how to help the people who light them. If you decide you want to take part, you do not have to answer all the questions and you can stop the interview at any time.

If you find any yourself getting distressed during or after the interview you (or the interviewer) can inform the Unit or Service Manager, who can ensure you get the appropriate support.

If you agree to take part in this study, and sign the consent form, the researchers may also access your file information held by the Department of Corrections, including treatment reports and the Criminal Needs Inventory. File material will be reviewed by the researchers at Department of Corrections premises and only information relevant to this study will be accessed. The researchers may also access treatment reports held with agencies other than the Department of Corrections. You may be asked to sign a separate consent form for these.

What happens to information about me?

Due to the small number of people participating in this study complete confidentiality can not be guaranteed. However, every effort will be made to protect your identity in any discussions, reports or publications about the study. Your name will not be recorded, a number will be used instead, and anything you say during the interview that could identify you will be changed as long as this does not affect the quality of the information. All information is kept under lock and key at the University of Auckland for a period of six years. Only the researchers will have access to this information. After six years, all information about you will destroyed by shredding data sheets and wiping any floppy/compact computer disks.

The answers you give to our questions during the interview will not be discussed with staff from the Department of Corrections *unless* you talk about things which suggest you may be in danger or that someone else is in danger; if you are physically threatening or if you use inappropriate language during the interview; or if you become distressed. In these cases, staff from the Department of Corrections will be informed immediately.

What if I have questions about the study?

If you wish to know more about the study or discuss your participation, feel free to contact your Unit Manager, who will facilitate contact with the researchers.

A copy of the final report can be downloaded by your self or the Department of Corrections in 2007, from the official website of the New Zealand Fire Service (http://www.fire.org.nz).

Ethical approval

This study has received ethical approval from the University of Auckland Human Participants Ethics Committee on 21/09/2005 for a period of 3 years, from 21/09/2005. Reference no. 2005 / 334.

If you have any concerns of an ethical nature contact: The Chair, The University of Auckland Human Participants Ethics Committee, Office of the Vice Chancellor, Research Office, Level 2, 76 Symonds Street, Auckland. Telephone: 373-7599 extension 87830.

CONSENT FORM

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF SIX YEARS

International approaches to preventing deliberately lit fires.

Researchers

Samantha Haines and Dr Ian Lambie from the Psychology Department of the University of Auckland and sponsored by the New Zealand Fire Service.

To

Adults who have had five or more arson related convictions during their lifetime.

Please read the following statements

- I have read and understood the Participant Information Sheet.
- I have had the opportunity to discuss this study with the researchers and I am satisfied with the answers I have been given.
- I understand that participation in the study is voluntary.
- I understand that I can withdraw my participation and data up to 1 June 2006.
- I give my consent to the researchers reviewing my file information held with the Department of Corrections, including treatment reports and the Criminal Needs Inventory, and treatment reports held by other agencies.
- I understand that the data will be kept under lock and key at the University of Auckland, separate from the consent forms, for a period of six years.
- I understand that all data will be destroyed after six years.
- I understand that the information from this study will be presented to the New Zealand Fire Service in report format and may be published in academic journals and other outlets considered suitable by the researchers.
- I understand that if the information provided is reported or published, every effort will be taken to ensure that it does not identify any individual as its source.
- I agree to take part in this research.

Please sign the consent form below if you agree to take part in this research

Name: Signature: Date:

Ethical approval

This study has received ethical approval from the University of Auckland Human Participants Ethics Committee on 21/09/2005 for a period of 3 years, from 21/09/2005. Reference no. 2005 / 334.

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