

**“Comparable Juvenile Firesetter
Intervention Programs – A Utilization-
Focused Evaluation”**

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Fall 2003
Exit Paper**

Abstract

Title: “Comparable Juvenile Firesetter Intervention Programs – A Utilization-Focused Evaluation”

This research employed a utilization-focused evaluation method to examine two cases of Juvenile Firesetter Intervention Programs in the cities of Portland, Oregon and San Antonio, Texas. The method employed began with the premise that evaluations should be judged by their utility and actual use; therefore, evaluators should facilitate the evaluation process and design any evaluation with careful consideration of how everything that is done will affect use. Comparative case studies were utilized for evaluative purposes in order to describe the programs and their limitations in providing intervention services to juvenile offenders. Program histories and profiles of typical clients were detailed for comparison purposes. Extensive interviews with key personnel provided relevant data for comparative purposes and for critical recommendations. Decision makers and information users who were to use the information that the evaluation produced were identified. Stated program goals, objectives, outcomes and problems were identified, and suggested solutions to those problems were offered for each individual program. An obvious lack of uniform data across programs in the United States with which to determine effectiveness was identified. The final recommendation section provided a proposed mechanism to begin sample testing the effectiveness of current intervention programs in a quantitative manner.

Introduction

This paper employs a utilization-focused evaluation method to examine two cases of Juvenile Firesetter Intervention Programs in the cities of Portland, Oregon and San Antonio, Texas. Comparative case studies are utilized for evaluative purposes in order to describe the programs and their limitations in providing intervention services to juvenile offenders. The lack of uniform data collection and availability of data necessitates the use of comparative case studies.

This paper examines, contrasts and evaluates two such programs. The Portland program is generally regarded as one of the best in the nation while the San Antonio program had an auspicious beginning but due to various reasons has not maintained its level of professionalism and is currently considered to be on the “comeback trail”.

An evaluation critique/comparison method of the two programs is employed, specifically using the Utilization-Focused Evaluation method proposed by Michael Quinn Patton (2000). While it is believed that this evaluation will benefit similar programs, it will be generally tailored to assist the San Antonio program’s efforts to improve and regain lost ground in its fire intervention efforts.

To begin the evaluation, the two programs to be observed in this case will be examined and compared for several factors. Program histories will be provided and profiles of a typical client of each program will be detailed for comparison purposes. Extensive interviews with key personnel in both programs provided relevant data for comparative purposes and for critical recommendations (See Attachment A). Decision makers and information users who will use the information that the evaluation produces will be identified. Stated program goals, objectives, outcomes (recidivism rates in this case) and problems are identified. Suggested solutions to those problems will be offered. The final recommendation section of this report puts forth a

mechanism to begin sample testing the effectiveness of current programs with the hope that future researchers will continue to move towards such an effective system.

Literature Review

Arson is the number one cause of all fires and the second leading cause of residential fire deaths. There were an estimated 418,000 intentional fires in 1999 in the United States. These fires resulted in 622 deaths and \$2.7 billion in property damage. For the eighth straight year, juvenile firesetters accounted for at least half (50%) of those arrested for arson in 2001. Nearly one-third of arrestees were children under the age of 15, and 5% were under the age of 10, according to the FBI. According to FBI statistics, only 16% of arson offenses in 2001 were solved by arrest. Juvenile offenders accounted for 45% of these arrests. An estimated 2% of intentional fires led to convictions. Intentional fires ranked first among the major causes in structure fire dollar loss between 1995 and 1999 (Hall, 2003). Fire service data compiled by the National Fire Incident Reporting System (NFIRS) have repeatedly shown that firefighter injuries are significantly higher at arson fires than at accidental fires. Arson fires account for 22 percent of firefighter injuries (Schwartzman, Stambaugh & Kimball, 2000).

Throughout the literature on the subject of arson, multiple variations of categories of arsonists have been defined. White (1996) delineates eight distinct variants: the pyromaniac (extremely rare in actuality although most popularly depicted in entertainment), the revenge firesetter, the arson-for-profit arsonist, the hero or “vanity” arsonist (all too often a new volunteer firefighter), the thrill seeker or vandal firesetter, the terrorist or social protest arsonist, the crime concealment arsonist and finally, the juvenile arsonist. Slavkin (2000) submits further typology for the juvenile firesetter: nonpathological firesetters, including the curiosity or accidental type, and pathological firesetters which include the “cry-for-help” type, the delinquent type, the severely disturbed type, the cognitively impaired type and the socio-cultural type.

The category juvenile firesetter is significant in that current data suggests that juveniles under the age of 18 are responsible for approximately 60% of all fires set in large cities in the United States and that juveniles consistently account for over fifty percent of all fires set (Smith, 1990). Fires set by children and adolescents are more likely than any other household disaster to result in death (Slavkin & Fineman, 2000). Although children five and under make up about 9% of the country's population, they accounted for 17% of the home fire deaths, assigning them a risk twice the national average (NFPA Online, 2003).

As noted earlier, prior suggested methodology to determine intervention program effectiveness has proven limited. “The research results showed that there is little information on specific instruction or national modeling for conducting follow-up to audit for any reoccurrence of fireplay or firesetting nor what information should be used to monitor and evaluate a program.” (Arlund, 1998). In order to rectify this situation, pertinent comparable information gathered must be identified and utilized to determine program effectiveness.

Numerous researchers in the field of juvenile firesetting have studied methods to attempt to determine levels of future firesetting activity. Sakheim and Osborn (1999) revisited existing studies and purported to have devised a method to determine to a 95% probability the ability to differentiate severe/high-risk from minor/low-risk firesetters. This differentiation and classification is vitally important to identify appropriate treatment modalities. While it is generally accepted in the curriculum that “minor” and “moderate” risk firesetters can usually be treated safely and effectively in the community with parent and child counseling, fire safety education, and social skills training, the “severe” firesetters require early detection, accurate diagnosis and assessment, and appropriate intervention to be successfully treated and rehabilitated. This level of firesetter generally poses a great danger to property, the local economy and the general public's health and life safety. Regardless of type it is strongly

suggested in all cases that a comprehensive, structured interview with the juvenile be conducted by properly trained personnel. Additionally, a family assessment is necessary due to the strong correlation between firesetting activity and family dysfunction.

Arson represents only a part of the juvenile firesetting problem. Children playing with fire represent another aspect. Children under the age of accountability, those lacking intent and whose motivation is not deemed to be arson cause over 3,000 fires annually, resulting in an annual property loss of almost 10 million dollars. These fires also result in an alarming percentage of injuries suffered by, and fatalities of children (San Antonio Fire Department, 2000).

Despite the above figures juvenile firesetting remains a little-studied area. The limited research available is dominated by a psychodynamic perspective (Slavkin, 2001). It has proven important to design and implement intervention strategies to attempt to minimize primary and reoccurring instances of juvenile firesetter activity. Lives and property lost and injuries and suffering sustained require that the issue be addressed, but the methods of intervention must be studied to determine viability. Prior research reveals limited scientific examination of data to determine effectiveness of Juvenile Firesetter Intervention Programs (JFIPs) although methods to examine and evaluate existing and proposed data have been identified (Arlund, 1998). While many juvenile firesetter programs have developed some internal system to monitor their caseloads, others simply maintain individual case files with no systematic way to track cases, determine final dispositions, report to funding agencies, etc. Very few have systems capable of being used for evaluation purposes (National Juvenile Firesetter/Arson Control and Prevention Program, 1994). No national model of information gathering, evaluation and dissemination has been affected to date. Therefore, it is important to determine if the present forms of intervention

programs reduce the reoccurrence of juvenile firesetter activity and to systematize the methods used to answer this question.

The term “juvenile firesetter” is often misunderstood. Parents often disbelieve that their children may exhibit such behavior and think, “only bad kids do bad things like that.” In reality, however, children become fire curious sometime during their development, usually between the ages of four and eight. Fire is fascinating to a child and attracts their natural curiosity (Slavkin, 2001). Movement, light, heat and color as well as the changes it brings to the environment around it makes fire attractive to the young mind. Unfortunately, the only education for the child on the matter of fire use is oftentimes a shouted “No!” Parents should be educated and prepared to handle this natural curiosity and to respond in an appropriate manner.

In the same way children displaying fire curiosity tendencies must be educated, so too should those who have exhibited firesetting incidences. Education as to the utility and dangers of fire must be exemplified to children in order to satisfy those curiosities. A structured, organized time-tested, nationally-based, locally refined intervention program would generally be believed to be effective in minimizing reoccurring instances of this behavior. By unmasking the mystery and explaining the phenomena to children, deviant behavior should be expected to decrease. In reality, however, can an intervention program be scientifically quantified to prove effectiveness? More importantly, can a national program that attacks the problem be designed so that it most economically reduces the problem? This researcher assumes that the answer to these questions is yes. The fact is that no such system (time-tested, nationally-based) currently exists.

Methodology

To conceptualize the key terms “juvenile firesetters” and “intervention program” it is necessary to define them. **Juvenile firesetters** are typically defined as “children or adolescents that engage in firesetting. Beyond its tautological character, such a definition implies a

singularity about firesetting in children and adolescents” (Slavkin, 2000). More to the point are those children that have displayed the tendency to “play with fire” with or without malicious intent at or under the age of 17.

Intervention program denotes a structured, organized program designed to eliminate future occurrences of such behavior. Operationalization of the success or failure of a juvenile firesetters program requires that identified subjects be followed using either subsequent criminal records or surveys to determine reoccurrence of the activity¹.

“Utilization-focused evaluation begins with the premise that evaluations should be judged by their utility and actual use; therefore, evaluators should facilitate the evaluation process and design any evaluation with careful consideration of how everything that is done, from beginning to end, will affect use. Nor is use an abstraction. Use concerns how real people in the real world apply evaluation findings and experience the evaluation process. Therefore, the focus in utilization-focused evaluation is on intended use by intended users” (Patton, 2000).

This method offers an evaluative process, strategy, and framework for making decisions about the content, focus, and methods of an evaluation. Utilization-focused evaluation begins with identification and organization of specific, relevant decision makers and information users who will use the information that the evaluation produces. The evaluator begins interactions with those decision makers by working to foster commitments to both evaluation of the program to be examined and the use of the evaluation once completed. Patton also emphasizes that researchers should use creative and practical design methods that are responsive to the situation to be observed. The goals of Utilization-Focused Evaluations should always be that the final product have utility and relevance to the intended users and be acceptable to those same users.

From the lack of scientific data it appears that program claims and unscientific methods have been utilized to date to determine success of most intervention programs. Based upon reported recidivism rates of program graduates, however, this evaluator hypothesizes that present juvenile firesetter intervention programs (independent variable) are successful in reducing

reoccurrences of juvenile firesetter behavior (dependent variable). This hypothesis proposes that there is a direct relationship between program completion and recidivism.

“Many Fire Departments programs report low recidivism rates, but do not accurately track offenders. Most programs report recidivism rates, and they are invariably quite low, rarely exceeding 7%. The rates are subject to question, because so few programs maintain accurate follow-up statistics" (Cook, Gaynor, Hersch &Roehl, 1989).

Therefore, the boasts of success must be examined in light of actual success and specific factors common to all such programs. Several programs reviewed during the research for this project reported projected recidivism rates. Each generally relies on follow-up interviews with program graduates at some time post program.

Portland Fire & Rescue Juvenile Firesetting Intervention Program

Portland, Oregon Fire and Rescue serves approximately 503,000 residents with 730 employees. In 2003, the Portland Juvenile Firesetting Intervention Program is entering its seventeenth year of service to the community, making it one of the oldest in the nation dating to January of 1986. The Portland program was basically started “from the ground up”, as few other programs existed at that time, in response to the overwhelming numbers of youth firesetters involved in arson investigations. The current director, Don Porth, is a juvenile firesetting intervention specialist and a twenty-three year veteran of the fire service. He has worked directly with child firesetting behaviors for over fourteen years. His implementation of the juvenile firesetting information database has made Portland's program one of the most noted in the nation. Porth is a member of the Juvenile Firesetter Intervention Network - NW Chapter, the Oregon Fire Education Association, the National Fire Protection Association as a steering committee member for addressing the national juvenile firesetting problem, and past Chair of the Oregon Council Against Arson. Porth holds a Bachelors of Science Degree in Fire Command Administration from City University (SOS Fires, 2003). He has been identified as the premier

stakeholder in the Portland program for purposes of input and expectations of the outcome of this evaluation.

While Porth is currently the Director of Public Education for Portland Fire and Rescue, the Portland program has one dedicated program manager for the intervention program. This is supplemented by up to fifteen field firefighting personnel who volunteer to participate in the program by conducting interviews and provide education from fire stations in the community. Porth feels that while the single program manager can fill the reactive needs of the program, this person should be complemented by personnel delivering proactive messages to the targeted community to address the concerns and act in a proactive manner rather than having the program wait on referrals of youth already exhibiting firesetting behavior.

The program is housed in the Public Education Section of the Fire Prevention Division and is funded by the approximate \$80,000 cost of the program manager and his support needs. While funding appears adequate according to Porth, over the year's budget cuts have threatened the program. Based on the above program cost the cost per referral is approximately \$500. However, additional services are purchased in this budget, and obviously added undetermined costs could also be attributed to the program with more in-depth analysis. Porth believes that such an analysis would probably provide a figure of about \$300 per referral. However during his interview he added this note:

“But consider this, in the first 8 years of the program, 16 fire deaths were attributed to youth set fires. In the past nine years, only 3 have been attributed to youth set fires. Overall fire loss is down as are youth fires. It is money very well spent” (2003).

The original goal of the program was to provide intervention services for families whose children had engaged in the unsanctioned and/or unsupervised (mis)use of fire. These services include educational intervention and/or referral to appropriate intervention services in the community.

When asked if the goals have been met and updated Porth stated, “they have been met over the years. The program goals are still the same. However, the information gained through delivery of the program has provided valuable insight into the behavior in order to direct proactive education programs to stop the behavior before it occurs. Much data supports the success of this approach” (2003).

Data is presented in an annual report entitled “*The Portland Report – A Report on the Juvenile Firesetting Issue in Portland, Oregon.*” The latest report (2002) contains data compiled over the last ten years. While not purporting to be a scientific study or research document, Porth prefers to let the readers draw their own conclusions after reviewing Portland’s findings. Porth also makes note that certain inconsistencies and gaps in data collection may have impacted the program due to staff changes and budget challenges. This observation is a common factor in all programs contacted during the course of this study. The average reported recidivism rate for the nine years with data in the report is six percent.

The current goal of the Portland program is summed up in the mission statement which states that the mission “is to identify the firesetting behavior of children who have been referred to the Program for the unsanctioned and/or unsupervised use of fire, determine the motivation for the firesetting behavior, and provide appropriate education and/or referral for such children / families” (Porth, 2002).

The objectives of the program are broken into six basic components. These are Identification, Intake, Education, Interview/Screening, Intervention Services, and Follow-Up/Evaluation. It provides a basic screening mechanism to determine the needs of families in order to overcome youth firesetting behaviors. The primary program element is the provision of educational intervention or referral to more comprehensive community services when it is determined that this is appropriate. Additionally, a “Proaction” component attempts to address the problem in a proactive method. It is in this proactive area that Porth believes greater emphasis should be placed. This is addressed in the recommendations section.

The typical referral to the program is an eight to twelve-year-old male Caucasian from a low-income, non-intact biological family. This profile varies under different evaluation criteria such as level of concern or by age.

In the Interview/Screening component, referred juveniles are categorized into one of three groups, based on the needs of the client. If the needs are educational intervention, they are deemed “Little Concern” and the program within itself works to fulfill those educational needs. When children are identified as engaging in troubled or “Definite Concern” firesetting behaviors, the required intervention is probably beyond the limits of what the Juvenile Firesetting Intervention Program can offer. “Extreme concern” firesetters urgently need intervention beyond the scope of the program. The terms were originally used back in the 1980's because they corresponded with the FEMA forms developed by Dr. Kenneth R. Fineman (1980), a psychiatrist who dealt with children and firesetting for a number of years. The form currently in use was developed by the Oregon State Fire Marshal's Office and is a derivation of Dr. Fineman's revision of the Federal Emergency Management Administration forms.

For children in the “Definite Concern” and “Extreme Concern” categories, the program assists the family in finding a program or agency best suited to the family’s needs. This may range from inpatient hospitalization for the child to family counseling. Parenting classes may be another recommended intervention plan. The program has established referral systems with mental health providers to facilitate services to families.

San Antonio Fire Department JFIP

The issue of addressing the problem of juvenile firesetters in the City of San Antonio, Texas officially began in January of 1994 at a meeting of individuals representing several agencies, including the Fire Department, District Attorney’s Office, the Juvenile Probation Office and the Red Cross. The children targeted were those that had an innate curiosity about

fire with the potential to experiment with possible disastrous results and those with psychosocial issues who utilized the power of fire to signal that they were unable to handle their current situations.

An advisory team of community partners was formed to study the necessity of such a program in San Antonio. Some of the things discovered were that 1) San Antonio mirrored the nation in that 40% of arson charges were filed against children, 2) certain areas of the city, typically those of low socio-economic status, had an increased number of fires set by children, 3) school fire safety was geared toward teaching a child what to do in case a fire started, NOT toward their experimentation with fire or the RULES surrounding fire use, and that 4) San Antonio had a problem with children and fire (Foster, 2003).

During the ensuing months programs in Phoenix, Houston, Atlanta, Cincinnati and Indianapolis were reviewed. The Phoenix model was more closely followed in the end. In April of 1994, the San Antonio Fire Department formally announced the establishment of their program in conjunction with several city and county agencies. The program was “directed at educating citizens of all ages about the extent of the juvenile firesetting problem and changing firesetting behavior through an intervention process. Intervention can include contact with a child firesetter and his family, education and referral to a counseling agency where applicable.” The program was to be “targeted at children old enough to play with fire and exhibit fire curiosity” and include their parents (Warner, 1994).

At the start of the program, a former arson investigator was assigned full-time and a firefighter injured in the line of duty was detailed to the program. The program was to start small and identify children at risk. Agencies that may assist in the program were to be identified. Firefighters, teachers, parents, counselors, day care providers and others were to be made aware of the program and provided information on how and when to refer “clients.” An informational

packet was to be developed to send to involved agencies. It was envisioned that the program would grow as experience was gained in addressing the local problem. A modest travel budget was obtained that allowed the two individuals to attend one conference a year pertaining to the subject of juvenile firesetters and a vehicle was dedicated to the program along with almost six thousand dollars to purchase educational materials.

The San Antonio program has experienced various changes in personnel, as all programs do over time. The current Program Supervisor, Lieutenant Machele Cevallos, is a thirteen-year department member who started working with the program in July of 2001. She currently supervises the Public Education/ Community Resources effort and at this time is currently involved in the day-to-day operations of the JFIP due to program deficiencies, staffing and recent personnel issues. The programs Intervention Specialist position has recently been filled by a Firefighter and is in training for the program. Upon completion this person should be able to relieve Lt. Cevallos of most of the day-to-day needs of the program. One of the original members of the program staff, Fire Apparatus Operator Deborah Foster, has returned to the program as the Program Coordinator after several years in Emergency Medical Services. Given her past experience from the initiation of the program to today, Foster has been able to provide much information regarding the program since its inception. Both Cevallos and Foster will therefore be considered the stakeholders for the San Antonio program.

Beginning in January of 2003, the Office of Public Education, the Juvenile Firesetters Intervention Program and the Public Information Office were consolidated to create the Community Resources Office.

To date, the Juvenile Firesetters Intervention Program has survived the budget axe, mostly due to dramatic reductions in arson losses in San Antonio since its inception and the similarly dramatic reduction in fire deaths overall. However, recent funding cutback have

limited the “*S.A.F.E.House*” Program (San Antonio Fire Education House) directed at educating school age children on escaping burning structures and eliminated the “*Backdraft Band*” program, used also to educate children in fire behavior and safety, gun safety and promoting an anti-drug theme, a stay in school message and promoting positive self-esteem.

The original goal of the program was to address fire loss issues and take a proactive stance against the problem of juvenile firesetting. In response to the questions of whether the goals were met, have they been updated and what are the current goals, Foster replied with the following:

“Within the first four years of the program, the goals were met and exceeded. By 1996, our program was one of the most regarded programs in the state. As a result we were asked to sit on a committee to develop a statewide curriculum on building Juvenile Firesetters Intervention Programs in Texas. After the curriculum was developed we became instructors, traveling and offering our expertise to Fire Departments who were looking to start programs of their own” (2003).

After some time, both of the originally assigned personnel moved to other assignments. Various department personnel were assigned to the program. Apparently some of those requesting these assignments did so due to the attractiveness of the work schedule, the relative unsupervised nature of the positions, or because of the lesser physical requirements necessary compared to firefighting duties rather than any burning commitment to juvenile problems.

“Changes in personnel impacted the program negatively. Once in position in JFIP, previous employees did not adopt the current goals or direction of the program and developmental growth was halted. Upon my return to the program I was tasked with regaining the ground lost with personnel and program implementation changes. With Lt. Machele Cevallos’ assistance, I hope to restore the successes attained in previous years. Once this is done we will continue to make the program even better” Foster concluded (2003).

The San Antonio program did indeed decline from its former stature of the premier start-up program in the state. After-the-fact interviews, analysis and review of program files reveal that some employees placed in the program after the initial two were often assigned on a seniority basis or due to work limitations, not due to a regard for the program. It is because of

this lack of management and oversight that little or no records or data of value can be produced for the last several years of the program. This, in fact, changed the scope of this study that initially was envisioned to be quantitative in nature and was to determine the accuracy of reported recidivism rates (See Attachment C). While Porth noted similar problems in the Portland program, it did not appear to have impacted Portland's program nearly as critically.

As with any public sector program, staffing is always in question. When queried as to how many personnel she believed should be dedicated to the program Lieutenant Cevallos' response was four.

"We visit our clients in teams of two", Cevallos states, "and usually visits are made after normal working hours to accommodate our JFIP families. Because we are limited by the days we are available to work after hours, it is often difficult to schedule visits. With a team of four, we could visit more schools and organizations during normal business hours and service our JFIP families in a more timely manner than we have in the past" (2003).

Foster believes a minimum of three and ideally four personnel would greatly benefit the program. She states,

"At least one employee will be needed whose primary responsibility will be to administrative duties pertaining to the program. A minimum of two people is required for an interview situation. This is not only necessary to adequately conduct the interview but also to protect the employees and department from liability issues. When educational services are provided to the schools through Fire Safety Presentations and Cloning and Puppet Shows the current staff are overwhelmed and unable to provide quality services" (2003).

The total of four noted would not include the position Lt. Cevallos currently occupies, as the combination of several programs should now require her as an administrator.

When asked to profile the typical client seen by the program, the current database utilized was unable to easily provide any such profile. However, a manual tabulation of case files reveals the profile of a ten-year-old Hispanic male using readily available matches and lighters to ignite fireworks, trash, brush or to burn vacant houses (Foster, 2003). Apparently three major issues complicate the ability to perform this seemingly easy task. First is the loss or lack of information

on prior referrals due to past personnel issues. Previous employees failed either to complete files or to enter them in the database. Follow-ups on clients seen were virtually non-existent; therefore the tracking of recidivism is not possible for this period of time. The second issue appears to be a lack of training and familiarization by field firefighting personnel. Few referrals of juveniles by these firefighters have been made to the program. Most clients seen are referred by the Juvenile Justice Court system. Looking at these referrals may give a profile of the average client seen by the program, but will not be useful to determine the typical juvenile firesetter in the community until all parties that should be making referrals do so. This problem is scheduled to be addressed in January of 2004 by a continuing education program that is being developed at this time. This module will be provided to firefighting personnel to familiarize them with the program and educate them as to what activities require referrals. A third problem is the lack of reliability of computers and the network utilized by the program. The intervention program is currently housed at Fire Station #20 on the far southeast side of the city, mainly due to administrative space considerations rather than proximity to any target audience, convenience to the program providers or access to computer networks. Computer, networking and database problems and unreliability seemed to be a continuous problem when trying to access information on any aspect of the program from this location. During a large part of this research the database was unavailable due to either computer or network problems. Recent budget cuts within the department in the area of information management make it appear doubtful that this problem will disappear altogether anytime soon.

The program currently utilizes Intake and Evaluation Forms developed by the same Dr. Fineman noted in the Portland program. They are standardized forms that assess the referred child and family for risk of firesetting behavior. All personnel in the program currently do intake and evaluation of clientele. An initial risk assessment determines whether the child's needs can

be addressed by the program alone, the program and additional outside counseling resources or if the child's situation is beyond the scope of the current educational program. The risk assessment process is used to describe the reasons behind the current firesetting incident(s) for which the child is being referred to the JFIP and to determine the probability of future firesetting behavior. The Risk Assessment is based on the following: Health History, Family Structures/Issues, Peer Issues, Behavior Issues, Fire History, Crisis or Trauma, Characteristics of Firestart/play and Observations made during the interviews. The assessment allows the interviewer to place the referral into one of four general classifications:

- Curiosity Firesetting-those children who, due to an innate curiosity about fire, experiment with fire. For example, the younger child who utilizes a parent's lighters or matches to emulate smoking, lighting candles on birthday cakes etc.
- Crisis Firesetting-those children who due to socio-economic or psychosocial issues utilize fire as a signal to those around them that their personal world has become unmanageable and they need help.
- Delinquent Firesetting-those children who deliberately set fires to cause damage to property. Firesetting is due to anger at another, seeking acceptance by peers or just to show off.
- Psychopathologic Firesetting-those children whose firesetting is a part of serious psychological issues. This firesetter is obviously beyond the scope of a Juvenile Firesetters Intervention Program.

The parent then completes a survey form with an additional questionnaire regarding the child's health, social and behavioral concerns. These responses to the questions are numerically weighted as per the Texas State Fire Marshals Office and Dr. Fineman (1980). Percentages are assigned to the parent, the child and the family unit to assess risk. The Fineman categories of

“little concern”, “definite concern” and “extreme concern” are then assigned to the referred client. If the overall percentage is less than 20% the child is placed at “little risk” and the San Antonio JFIP educational curriculum is utilized to educate the child to the dangers of fireplay². If the percentage is between 21% and 66% a “definite risk” assessment is assigned. This child, if not already involved with services such as psychological intervention, is educated by the JFIP and referred to appropriate agencies. If the percentage is at 67% or greater, the child is placed at “extreme risk” and is referred to appropriate agencies. In this instance it is sometimes necessary for the child to be referred out and receive those services before the JFIP is able to provide educational services. Likewise, it may be determined through this assessment that the program will provide no benefit to the child unless the underlying psychological or social issues are resolved beforehand.

Follow up of clients and the tracking of recidivism must be at the core of any such program to evaluate effectiveness. In San Antonio, after a child completes an educational program the family is followed up at specific intervals of thirty days, six months and one year. The thirty-day follow-up includes a written questionnaire and an inspection of the home by JFIP personnel. The six month and one year follow-ups are simply phone calls to follow the progress of the client and their family. If there has been no indication of firesetting behavior within that time frame (one year), the child is “graduated” from the program and the file is moved to an “inactive” status. If the client is referred back to the program after the “graduation” the file is reopened. The educational approach is adjusted to address the current firesetting situation. This self-reporting mechanism relies on the family’s truthful forthcomings. Unfortunately, recidivism rates in the San Antonio program cannot be determined. Lt. Cevallos noted that prior to November 2002, JFIP personnel did not properly service clients or either failed to document any services provided. Since that time a number of past referred clients have contacted program

personnel and stated that they had tried in the past to receive services, but were never properly taken care of. In mid 2003, personnel changes were effected that should address this problem.

Juvenile set fires monitored over the life of the program reveal a trend that is believed to belie the success of the San Antonio program since its inception. The term “child play” denotes children playing with items that start fires (matches, lighters, etc.) or with items that are flammable and came in contact with an ignition source (paper, blankets, etc.) It does not denote intentionally set, or arson, fires. In the chart below, significant reductions in incidences of all types of fires noted are apparent. “All Fires Involving Child Play” has experienced a 77% reduction over a nine-year period. One may leap to the conclusion that the Juvenile Firesetters Intervention Program and other programs targeting youth may have caused this reduction. However, when compared to the reduction of 43% for “All Fires”, there is a .96 correlation between these two reductions, which is statistically significant. This simple analysis points out the needs for more in-depth study of available statistics.

Table 1

**San Antonio Reported Fire Statistics
1994-2002**

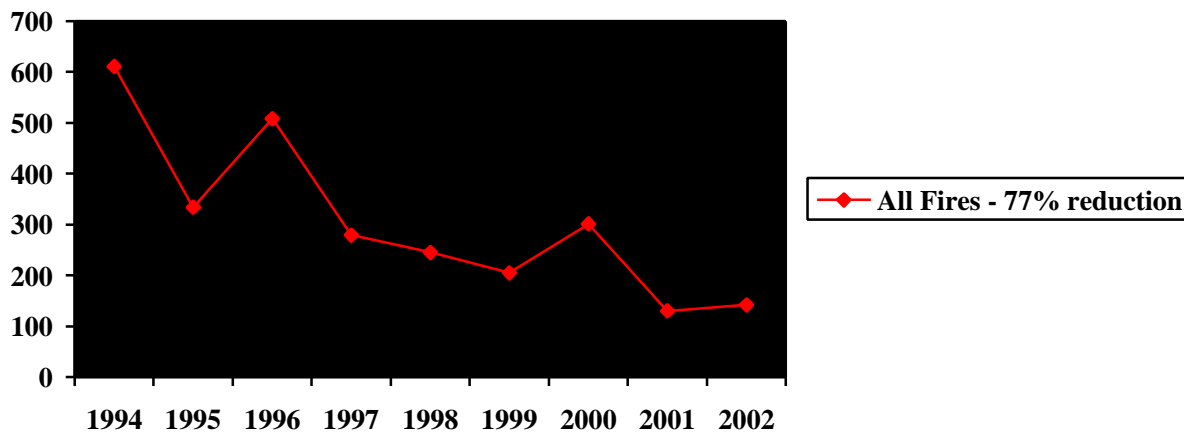
Year	All Fires	Structure Fires	Structure Fires Involving Child Play	1&2 Family Dwelling Fires	1&2 Family Dwellings Involving Child Play	Apartment Fires	Apartment Fires Involving Child Play	All Fires Involving Child Play
1994	8807	1552	94	942	65	254	20	611
1995	6754	1439	64	823	48	279	15	334
1996	9136	1588	77	929	47	269	21	508
1997	6661	1435	62	834	44	285	11	279
1998	6733	1333	61	795	44	233	11	245
1999	5609	1184	55	711	40	243	8	205
2000	6875	1281	50	740	33	252	13	301
2001	4942	1217	55	761	42	206	11	130

2002	5043	1160	49	675	38	236	10	142
% Reduction	43%	25%	48%	28%	42%	7%	50%	77%

As will be noted later in this evaluation, presentation of data is extremely important to convey the message that the analyst wished the audience to understand. In the above table, as in *The Portland Report*, the reader must take time to analyze the numbers provided. A more useful presentation of the data, for example, is displayed below in graph form to provide an illustration of the power of graphical displays in telling a story.

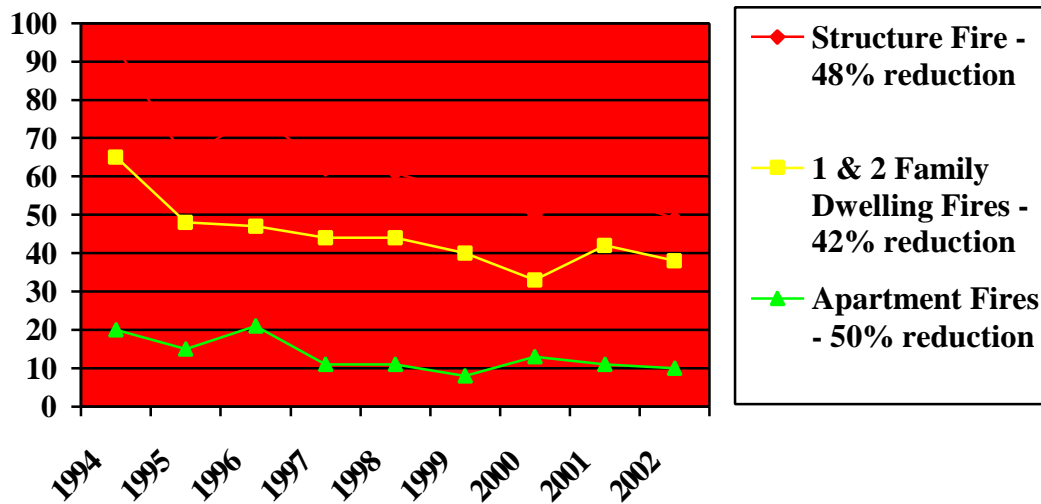
Graph 1

**All Fires Involving Child Play
San Antonio, Texas 1994-2002**



Graph 2

**Structure Fires Involving Child Play
San Antonio, Texas 1994-2002**



Such reductions as noted above only point out the need to empirically determine whether a cause and effect relationship does in fact exist between the Juvenile Firesetters Intervention Program and the numbers of child set fires. It should be noted here that such statistics should be analyzed in terms of residents or households per capita, number of apartments occupied, and other pertinent factors.

Costs for the program include personnel funding, vehicles, facilities and equipment, support costs and miscellaneous. Costs obtained for the above totaled approximately \$154,794.40 for the fiscal year 2002-2003. Approximately one hundred seventy-five clients were referred to the program with about sixty-five of them actually being seen, giving a per referral cost of \$875.21 and a per client seen cost of \$2,356.33 (See Attachment C). While this figure may seem high when compared to the Portland estimated per referral cost it must be noted that Portland's estimate may not have included such a detailed a cost accounting. A more relevant cost may be the total cost of the JFIP itself, approximately \$153,161.43, when compared to the cost of a single apartment building fire. Such a fire generally is estimated to cost nearly one million dollars in damage when a common twelve-unit complex is destroyed. As noted in

the above statistics, San Antonio has enjoyed a 50% reduction in apartment fires involving child play over a nine-year period. However, once again the data only provides trends, not proven correlations. As such, a more in-depth economic assessment should be made before comparing the success and costs of any such programs.

The effectiveness of the intake, screening and educational process described is generally referred to as “successful.” But as noted earlier, no quantifiable data has been maintained to determine effectiveness or recidivism rates. Indeed, as noted by the program providers, no critical evaluation of the program has been performed in the ten years of the programs existence outside that of the annual budget review to determine continued funding. This entails a budget-based rather than an outcome-based evaluation. Fending off the proverbial budget axe has relied on Fire Department management pointing to general statistics of a decade-long decline in child-involved fire as noted above, reduced fire losses and lower annual fire fatalities. Whether these positive statistics and their relationship to the program can be backed up empirically any time soon is doubtful. Yet, in the lack of experiential data and any immediate method to obtain said data, it appears fruitful to continue the program funding while requiring an assessment of its effectiveness.

Comparing the Two Programs

From the profiles provided it becomes apparent that the programs share many similarities while at the same time being very different in some aspects. Table 1 provides a brief look at the two programs comparable vital statistics.

Table 2

Vital Statistics

Agency	Population	2002 Clients Referred	2002 Clients Seen	Personnel Assigned to Program	Volunteers Utilized by Program	Reported Recidivism Rate Tracked
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Portland Fire & Rescue	530,000	137	95	1	15	6.8%
San Antonio Fire Depart.	1,144,000	175	65	2-3	0	Unknown

While the mission statements for both aspire to attain nearly identical goals, and the initial interaction between program providers and client referrals follow very similar paths, the programs diverge at this point. While San Antonio utilizes limited dedicated personnel assigned to the program by the department, Portland leverages its meager overhead staff with field firefighters volunteering to participate in providing the service to the community. And while Portland aspires to prevent firesetting activity in the future by taking a more proactive stance, San Antonio has dedicated a greater percentage of its time and effort to preventive measures.

However, the most apparent and important difference between the programs involves the acquisition, analysis and utilization of data. While San Antonio suffers from past personnel and supervisory problems and has managed to develop a rather limited amount of relevant information pertinent to the local problem, Portland has benefited from its ability to maintain staff over a longer term that has continued to acquire, maintain and provide information about their juvenile firesetter problem and their efforts to address it. Portland's annual report runs to almost one hundred pages and provides innumerable tables of data from which one can draw general suspicions and unproven conclusions. While it must be argued that it will always be best to scientifically test hypothesis against this dearth of information, it cannot be denied that Portland remains better off with raw data examined by untrained eyes than San Antonio with little data to lay eyes on and from which to draw neither right nor wrong conclusion.

Both programs have some level of data, either available to it presently or within easy reach that is in dire need of analysis and presentation to the firesetting intervention community by a trained dedicated researcher wishing to make a positive contribution to this developing area.

Individual Recommendations for the Programs

Recommendations generally reside near the end of a report or evaluation, however recommendations generally are the most sought after and read pages of the report. In most all cases, supporters and critics tend to point to recommendations made to bolster a position while ignoring the efforts made to arrive at those recommendations.

In a utilization-focused evaluation, however, the participatory nature of the process serves to provide collaborative problem seeking and solving situations and interfaces. Participants, both evaluator and stakeholders/funders/clients, must be engaged in the process to make it even modestly successful. From this viewpoint, recommendations in a utilization-focused evaluation may be a final wrap-up of mutually discovered needs that have been agreed upon and implemented during the evaluation process. Additionally, recommendations provided by this form of evaluation come from a negotiated agreement between the evaluator and stakeholders and must be such that stakeholders have the ability to implement or ignore and are not outside of their jurisdiction. That being said, the recommendations included here should be addressed in mid-range and long-range fashion, as agreed to by the stakeholders.

Imitation is the sincerest form of flattery and all public service agencies continually monitor, question and emulate their peers. The fire service is no different. In the course of this study, several other programs were reviewed and various service provision variations were noted. However, the San Antonio and Portland program are varied enough in method and content delivery to provide a basis for reciprocal critiques. As noted in the comparisons of the

programs provided above, a melding of the two programs would produce a much superior product.

Recommendations To The Portland Program

Portland Fire and Rescues Juvenile Firesetters Intervention Program appears to be a model for other programs. Its greatest asset appears to be its collected data, as well as its dedicated staff. Don Porth notes that readers should review the report and draw their own conclusions from the data. This method may suffice in many instances to provide information to the generalist, but raw data may be prone to potential errors in causal explanations without appropriate statistical analysis. These types of errors may include ecological fallacies, reductionism, tautologies, teleologies and spuriousness (Neuman and Wiegand, 2000).

An immediate recommendation, or at least possible for the next edition of *The Portland Report*, is the reporting of recidivism rates by interviewed classification. Rates for those classified as “little, definite and extreme concern” have been aggregated in the past to a single reported percentage. It would be preferable that each of the above mentioned groups are broken down annually into their rate of recidivism, and that those groups’ recidivism rates be aggregated over the years. Reported recidivism rates for each would be of interest, especially those of “little concern” as they are the primary clients of the Portland internal intervention program. While this exact method of reporting recidivism rates was incorporated into the “SOS FIRES Research Project 2000” noted below, it should be institutionalized into the annual report so as to better illustrate recidivist trends.

Porth noted that researchers for various research projects sometimes select data from *The Portland Report*. The Consumer Product Safety Commission (CPSC) did a statistical analysis using Portland and Rochester, New York as their base for data when working to determine the effectiveness of the 1994 child-resistant lighter legislation (CPSC, 1994). In 2000, the Institute

for Circumpolar Health Studies in cooperation with the University of Alaska Anchorage did an extensive review and analysis of the programs data. It encapsulated a 10-year window of time and posed eighteen specific questions of the data (SOS Fires, 2000).

Additionally, Portland's data has been used in similar ways that remain yet unpublished. This high-level yet sporadic statistical analysis points out that significant information is readily available to the researcher willing to devote the time necessary to glean it from the raw data provided. A mid-range recommendation, therefore, is to seek sources to provide annual and continued statistical data evaluation of the captured data. Corporations, foundations and universities with post-graduate schools of study should provide the likeliest candidates to provide assistance in this advanced analysis. This may provide better insight into the true factors affecting juvenile firesetters in the Portland program, improve community awareness and lend even greater creditability to an already followed report. This more in-depth statistical analysis should be published in conjunction with, and as a supplement to *The Portland Report*.

The Portland intervention program is apparently effective in identifying, categorizing and treating juvenile firesetters, or those with a propensity to exhibit fireplay. However, the Portland Fire & Rescue Department apparently lacks a concerted organization-wide effort to provide greater institutionalized prevention education and awareness training to the targeted community, its youth, via all operational units. While in Portland one person is dedicated to preventative youth education, this effort cannot be complete unless it is supported by an organizational philosophy of prevention. Having the support of every emergency operations unit to deliver consistent messages during station tours, school visits, and public demonstrations is vital to the consistent messaging needed to influence children. As noted by its director prevention is always more effective than treatment.

One final recommendation would be that funders/ stakeholders at Portland Fire & Rescue adopt a long-range goal to more proactively address the prevention of juvenile firesetting activities in their community. While some prevention activities are provided, Portland has apparently allocated more resources to intervention than prevention. Examples of prevention programs effective for the San Antonio program have included the previously mentioned *Backdraft Band*, a group of dedicated firefighters providing various targeted messages to school children. Children may learn “Stop, Drop and Roll” to “Exit Drills In The Home” (EDITH) to “Don’t play with fire” to “Stay away from drugs,” but the overarching message is fire is a friend but it is dangerous, and it can kill. The band is supplemented by “Sparky, the Fire Dog,” a firefighter in a Dalmatian costume as well as “Flame, the Clown”, all meant to attract and maintain the attention of the targeted audience. Additional programs include the fire prevention week poster contest typical of most departments across the country, an annual “Fire Muster,” or fair aimed at both firefighting enthusiasts and their children, and the *S.A.F.E House*, a large enclosed trailer used to teach children how to escape from a smoky building and what to do when they get out.

A new program currently coming to the department in San Antonio is the “Adopt-a-School” Program that will encourage fire companies to partner with schools within their response area to provide mentoring services to children in need. While this program is intended to provide role models to all children encountered, firefighters never fail to provide the fire safety message when given the chance.

With the exception of the dedicated firefighter band program, most of those mentioned are relatively inexpensive to the providing department. Corporate and community sponsors can often be obtained to defray costs. Any of the above examples, and many more found in fire

departments across the country, can and should serve as examples to Portland as to what can be done to provide the fire prevention message to the targeted youth of the community.

It is probable that each and every one of the examples given above is familiar to someone at Portland Fire & Rescue. In fact, it should not be inferred that the City of Portland has not now or ever provided prevention activities and education via some delivery system. Indeed, Portland was chosen and worked as a national pilot test site for the *Learn-Not-To-Burn* program from the NFPA back in 1990 and utilized the curriculum throughout the 1990's until education programs were redirected to the *Risk Watch* Curriculum beginning in about 1996, when Portland became one of six national pilot test sites for this curriculum. Portland was also one of the first cities to utilize the Bic "Play Safe! Be Safe!" kits (in cooperation with Fireproof Children) on a large scale, distributing approximately 250 kits in the community in about 1995. However, the recommendation goes toward moving to an institutionalization of the fire prevention message via all fire department members and units and providing the means and curriculum to promote that message. Generally, all that is required is the desire to break new ground, follow up on the program and seek department leaders willing to assist, or at least allow, such an expansion of the current program. While Porth believes that one program manager can manage and supervise the intervention program on its reactive side very well, it should be noted that management for a preventative program generally would require dedicated staff to provide continuity and oversight. Therefore personnel cost will be the immediate barrier to easy implementation in any municipal fire organization, where staffing is expensive and scarce. This type of organizational commitment to prevention activities would go a long way in Portland, a city of 530,000 with about 50,000 school age children.

Recommendations to the San Antonio Program

The San Antonio Fire Department's Juvenile Firesetters Intervention Program appears to be at the threshold of beginning the road back to its former stature. The recent reorganization of all prevention/education related activities into one Office of Community Resource Education should assist in leveraging assets available to the program to better serve its clients. The assignment of dedicated individuals to the program is at this time its greatest asset. However, this arrangement could change at any time in a program within a civil service system type of organization.

The San Antonio Fire Department has been very successful over the last number of years utilizing firefighters from the field to assist in prevention activities. On-duty firefighting personnel have supplemented the *S.A.F.E. House* program successfully when they were needed. Therefore, San Antonio should emulate Portland by training and using on-duty personnel to provide identification, intake, education, screening and intervention services. Program personnel that are not subject to the quirks of shift-work, however, should always do follow-up and evaluation of clients. This nearly immediate goal should be undertaken not only to leverage assets for the program and its limited staff but to also enter the mentoring aspect of having a career firefighter communicate with children in the community facing problems beyond their control. Since San Antonio is already heavily committed to juvenile fire prevention activities this is a next logical step with little cost and possibly large benefits.

The database currently in use is provided by the Texas State Fire Marshals Office and in use around the state. Due to the lack of reliable data and follow-up on past clients, lack of reliability of the computers and networks, and the apparent inability to customize reports from the database, it is indeterminate as to whether the current database can or will fulfill the need to provide critical data to analyze the San Antonio program. Many recommendations could be

made to improve this system. Therefore, a mid- to long-range recommendation, and the most important for the San Antonio program is that a database and computer system be provided that is capable of providing for all of the needs of the programs clients, providers, funders, and researchers that should be viewing and analyzing this data. This is obviously a broad recommendation, as this report has no intention or place in detailing the specifics of the requisite database or technological needs. However, some points should be noted, as they were prevalent to all programs reviewed. A method to track clients to the greatest degree possible is required. Mortality of the client base greatly affects the ability to project recidivist rates. This should include an effort to track recidivists region-, state-, and possibly nationwide. With the current ongoing implementation of NFIR5.0 (National Fire Information Reporting System, version 5.0), and the assistance of local law enforcement agencies, this should be attainable sometime in the future. More immediately, it will be imperative that cooperative relationships be developed with all regional fire and law enforcement agencies to cooperate in data gathering, management and sharing. As with the Portland program, local corporations, foundations and universities should be looked at to provide expertise and data analysis.

As noted at the beginning of this section, San Antonio at this time enjoys the assignment of capable, dedicated individuals to the program. Given the nature of program funding, collective bargaining agreements, promotions and other factors that affect individuals decisions, it cannot be taken for granted that a return to the problems of less dedicated individuals being placed in the program could not happen again. Therefore, the final recommendation for the San Antonio stakeholders is that they consider civilian education specialists with curriculum development skills in the future to supplement the uniformed personnel currently assigned. Then, should a changing of the guard occur, as it inevitably will, continuity of the program can

be assured. A program of this sort is far too great of a commitment for a community to let languish and diminish merely due to personnel changes that should be foreseen.

Final Recommendation - A Sampling Proposal for Juvenile Firesetter Intervention Programs in Major Cities

It should be noted here that the intent of this researcher initially was to determine the accuracy of recidivism rate claims by established Juvenile Firesetter Intervention Programs in major cities. Due to the lack of information and its uniformity, limited follow-up data, and the time, scope and budget requirements necessary to adequately complete a program as ambitious as initially proposed, it has proven more than difficult to appropriately address this research project as originally intended. A more manageable scope was subsequently identified to hopefully benefit two programs and provide recommendations for improvements.

However, this researcher would be remiss to not acknowledge and provide the work completed prior to this realization. A quantitative study proposal was developed for this purpose and will be included in this paper for the purpose of providing the seed for possible future detailed research in recidivism rates by juvenile firesetters. This proposal is provided in Attachment D.

Conclusion

Utilization-focused evaluations provide the means to examine a program from both the inside (the stakeholder) and the outside (the researcher). It allows a reasonable, agreed upon, consensus building process to produce workable and usable recommendations to the participants. It should be noted in this context however that this evaluation method has been used in conjunction with comparisons, pitting strengths and weakness of what appears to be like programs. “We have frequently encountered the idea that a program is a fixed, unchanging object, observable at various times and places...Such assumptions can easily lead to evaluation-

research disasters. Programs differ from place to place because places differ” (Edwards, Guttentag, and Snapper, 1975). This thought must be kept in mind when considering the comparisons and recommendations concerning the two programs reviewed. Researchers should always strive to compare “apples to apples” but must always acknowledge that this is difficult at best.

Fire data statistics are a numbers game, and as such generally lend themselves to quantitative research methods and results. It was with this ambition that this project began – to statistically disprove the null hypothesis “that the present forms of intervention programs do not reduce the reoccurrence of juvenile fire setter activity in the United States”. Unfortunately, upon reaching the research phase of the project, it quickly became apparent that adequate data was not available to disprove the hypothesis, at least not with the abilities of this researcher or the constraints of the project. It appeared at that time that the quantitative research methods and statistical knowledge obtained in the preceding years of the post-graduate study program would be underutilized. However, over the process of learning, using and accepting the concepts of the utilization-focused evaluation method, it became apparent that researchers must be ready to accommodate change, and seek and use the appropriate tools to gain the results sought after.

Having completed this project without the ability to quantitatively analyze subject programs, it is the authors conclusion that the two established Juvenile Firesetter Intervention Programs observed are indeed successful in reducing reoccurrences of juvenile firesetter behavior and that there is a direct relationship between program completion and recidivism. To what degree this conclusion proves to be true remains to be empirically determined.

It remains this researchers belief that results of intervention programs must be eventually evaluated on a relatively nation-wide scale, accounting for local variations. The balance of cost versus benefit appears weighted to the side of continuing such programs in light of claimed

results. However, continuing financial shortfalls in cities around the United States may eventually force out those programs, however successful, unless quantitative, statistical analysis can prove to those stakeholders providing limited funds that each dollar provided has been well spent. This report challenges the next researcher to assist in moving the body of knowledge towards this goal.

Attachment A

Evaluation Project Questionnaire

Interview Questions for Juvenile Firesetters Intervention Program Administrators/Directors/Evaluators

In order to assess/evaluate the Juvenile Firesetters Intervention Program with which you are associated, interview information acquired from members that administer, supervise, coordinate or work in the program is necessary. Additionally, referral evaluators and follow-up evaluators information is extremely valuable in this effort.

Please provide answers to the below questions to the best of your ability. Short answers are acceptable. For additional information, you may refer the researcher to the source of the information. Please answer NA to those questions that are not applicable to your position or program. Please answer UNK to those questions that you do not know the answers to.

A follow-up personal interview may be required at a later date to clarify or focus any answers.

Thank you for your time,

Rodney Hitzfelder

Name?

City/Department/Agency?

What is your title?

What is your role in the JFS program?

Describe your program.

When did your program begin?

Whose program was yours modeled after?

What was the reason for starting your program?

What were the original goals of the program?

Have they been met? Updated? What are the current goals?

What resources have been given to the program over the years?

Does it have a permanent home? Multiple facilities?

When did you start working with the program?

Do you do intake/evaluations of referred clients?

What do you find is your “average” referral? Gender, age, race, economic and family background, income, marital status of parents, etc.)

What categories of firesetters does your program identify? (provide definitions or the source of this information).

Has the program been evaluated before?

Is the evaluation available?

What budget is provided for your program?

What sources provide the funding?

How many people are currently assigned? In the past?

How many people assigned do you believe the program needs?

Is funding for the program adequate in your view?

Has funding proved difficult?

What is the annual cost of the program? (Personnel and resources)

What is the cost per referral? (If this information is unavailable how can it be attained?)

Does your program provide internal counseling or outside counseling sources?

Who provides internal counseling?

What agencies provide outside counseling assistance?

Do you receive feedback from the outside counseling programs?

What is your definition of recidivism?

How do you track recidivism?

Does law enforcement cooperate in tracking/referring recidivists? Other agencies?

What is your relationship with the Arson program in your jurisdiction?

Do you accept referrals from outside your jurisdiction?

What information does your program capture?

How do you use that information?

What analysis is done on this information?

Who evaluates or sees this analysis?

What information do you believe should be additionally captured?

What would you like to see done with this additional information?

What additional analysis would you like to see done?

What questions do you want answered from this analysis?

What do you believe would improve the program?

What future do you see for the program?

Please provide any further information or comments that you feel would be valuable.

Attachment B

Intake Questionnaires

Portland

02/07/2003

Juvenile Firesetter System

Page 1

JUVENILE INFO				
Local Juvenile ID: 03-02-005	Age: 0	Gender: Unknown		
Juvenile Name: .	DOB:	Race:		
Incident Address				
street:	city	state	county	zip
Juvenile Address				
street:	city	state	county	zip
Home Phone: (503) -	Census Tract: 0.00			
School Information:				
Grade:	District:			
School Name:	Home School: No			
County:				
Behavioral Diagnosis:		Repeat Offender: No		
Access To Matches/Lighters Prior To Incident: No				
FAMILY/CAREGIVER INFO				
Family Unit:	Do Others Smoke In The Family: Unknown			
Other:				
Female Caregiver	Male Caregiver			
Name:	.			
Phone:				
Phone Type:				
Smoker: No	No			
Relation To Child:				
Status Of Biological Parents:	Annual Income:			
INCIDENT INFO				
Alarm #:	Fire Date:	Fire Time:		
Identifier Name:				
Area Origin:				
Ignition Source:				
Item Ignited:				
Where Ignition Source Was Obtained:	Other:			
Dollar Loss:	# Of Civilians Injured: 0			
# Of Fire Sets: 0	# Of Deaths: 0			
Referral Source(s):				
Other:				
Caregiver At Time Of Incident:				
# Incidents Reported By Caregiver:				
Associates Involved In				

FORM 101 INFO		
Incident Location:		
Other:		
Room/Area Origin:		
Form Of Heat:		
Other:		
Accelerant Used: NO		
INTERVIEW INFO		
Interviewer Name:	Date Of Interview:	
Intervention Provided For The Juvenile:		
Other:		
Contact Attempts:		
Appointments Set:		
Interview Form Tallies - P:	C:	Final Disposition:
Parent Questions: A: 0 B: 0 C: 0 D: 0 E: 0 F: 0 G: 0 H: 0 I: 0 J: 0		
Child Questions: A: 0 B: 0 C: 0 D: 0 E: 0 F: 0 G: 0 H: 0 I: 0 J: 0 K: 0 L: 0 M: 0 N: 0		
FOLLOW UP INFO		
Follow Up Date:		
Recidivism: No	Recidivism Type:	
Access To Matches/Lighters Now: No		
(1-5)		
Rate The Program Educational Methods Used:		
Rate The Program Effectiveness :		
Rate The Program Interviewer:		
Rate The Program Overall:		
Member Making Report :	Title:	Date:
Comments :		

San Antonio **Juvenile Firesetters Intervention Program**
Profile and Intervention Form

Today's Date: _____ Intervention by: _____

Child's Name: _____

Probation: Y / N

Date of Intake: _____

Presenting Problem: _____

Firesetting Scenario: _____

Psychological or Impulse Disorder Diagnosis (if any): _____

Diagnosed By: _____

RX. _____

Individual Traits: _____

Social Circumstances: _____

Risk Level Determination: _____ CFR – % FFR – % PQ – %

Educational Intervention Plan: _____

Referral? Yes No Specify Agency: _____

Remarks: _____

Attachment C

Cost of San Antonio Juvenile Firesetters Intervention Program

Fiscal Year 2002-2003

PERSONNEL COSTS					
Rank	LIEUTENANT	FAO*	FIREFIGHTER		
Life insurance	\$84.00	\$72.00	\$74.00		
Language skills pay	\$0.00	\$0.00	\$600.00		
Health insurance	\$4,908.00	\$4,908.00	\$4,908.00		
Social Security	\$907.00	\$701.00	\$0.00		
Salary	\$52,765.00	\$46,165.00	\$43,777.00		
EMT pay	\$1,800.00	\$1,800.00	\$0.00		
Fire certification pay	\$360.00	\$360.00	\$360.00		
Education pay	\$3,120.00	\$0.00	\$0.00		
Pension contribution	\$15,425.00	\$12,348.00	\$12,637.00		
Dental, optical legal insurance	\$1,458.00	\$1,458.00	\$1,458.00		
Prepaid retirees health	\$4,775.00	\$4,079.00	\$4,180.00		
Longevity	\$3,357.00	\$1,768.00	\$5,349.00		
Higher class pay	\$0.00	\$25.00	\$0.00		
Overtime average pay		\$3,758.85	\$3,756.45		
Annual employee cost	\$88,959.00	\$77,478.99	\$77,135.57	Total employee cost	\$243,573.56
% time to dedicated to JFIP	30%	80%	80%	Average time dedicated	63%
Program cost of employee	26,687.70	61,983.19	61,708.46	Program employee cost	\$150,379.35
ADDITIONAL COSTS			ONE-TIME	ANNUAL	63%
Office/facilities					
Annual maint. & repair	720' sq x \$.15			\$108.00	\$68.04
Furniture costs - one time			\$2,280.00		\$0.00
Annual utilities	720' sq x \$1.60			\$1,152.00	\$725.76
Computer/printer/software			\$2,044.00		\$0.00
Computer maint./license				\$849	\$534.87
Vehicle cost			\$16,369.00		\$0.00
Vehicle maintenance				\$1,015.00	\$639.45
Fuel				\$1,291.00	\$813.33
Total Annual Program Cost					\$153,161.43
# of referrals annually	175			Cost per referral	\$875.21
# of clients seen annually	65			Cost per client seen	\$2,356.33
# of referrals not seen	110			Cost per client unseen	\$1,392.38
*Fire Apparatus Operator					

Attachment D

Proposed Research Design To Determine Program Recidivism Rates

This proposed research will depend primarily on respondent data from participant programs, but will be checked against responses from individuals having “successfully” completed a juvenile firesetters intervention program. A substantive, micro-level approach will be utilized to answer the research question. The target population will be limited to ten major metropolitan cities (over 500,000 population) whose Fire Departments have sponsored an intervention program for at least seven years. In order to avoid sampling issues, the primary portion of the survey will collect what information the study cities are compiling to monitor and evaluate their programs, as well as how the program is tracking recidivism rates. The findings of the survey will determine if and how the programs are evaluating recidivism and what statistics are being reported. Validity must be accounted for in the survey by carefully structured, specific questions that allow respondents to accurately reflect information in a form usable to the survey. Phone follow-ups after receipt of the data to further answer questions of compatibility may be necessary to clarify program compatibility with the survey needs.

The secondary portion of the survey will gather information on the target population and will include children under the age of 18 (at the time of referral) that have been identified as having exhibited firesetting behavior and have been referred to, and completed, an intervention program. Subjects must have participated in an intervention program at least three years prior to the implementation of this survey. This is necessary to ensure that a relatively large sampling frame will be available in each study program with a timeframe relative to the longitudinal study period. Dependent upon the number of applicable cases available, a simple random sample of the cases that fit these parameters will be selected for study.

Acceptable programs must contain certain curriculum and objectives as determined by the National Fire Protection Association and identified in the survey. A willingness to provide individual juvenile firesetters information by the jurisdiction will be a requisite to inclusion, in that specific individuals or their families must be contacted for follow-up survey purposes. A commitment to share research data with the respondent cities may prompt compliance.

Upon completion and receipt of the survey information from the ten cities, a list of individuals that have completed a juvenile firesetters program and appear not to have displayed recidivistic tendencies will be compiled. After seeking and receiving parental consent, randomly selected “graduates” and their families from each city will be sent a simple, prepared questionnaire to determine their response to the intervention program and subsequent displays of firesetting and other specified behaviors. This “double survey” design is to determine validity of success rate claims of respondent programs. Since the respondents will be self-reporting it is critical that careful construction of the questionnaire be utilized to elicit appropriate and truthful responses. While the vast majority of needed information may lie with the respondent cities program, a necessary test variable is actual self-reported recidivism. In order to prevent an ecological fallacy that may occur from a mismatch of data from a higher (program) unit of analysis to a lower (individual), it will be necessary to triangulate the individual’s responses to the response reported by the program.

Data Analysis

The Independent Variable and Control Variables

The completion of a program by a youth involved in firesetting activities will be the independent variable for this research. Control variables that will be gathered and accounted for will include age, race, gender, family socio-economic status, family unit details, and multiple details of the firesetting incident.

The Dependent Variable

Recidivism of firesetting behavior after completion of an intervention program will serve as the dependent variable for the research. Recidivism will be modeled as a yes or no answer, where no shall mean those individuals that are reported by the respondent programs not to have exhibited further such behavior and also have self-reported the same results. This situation will be termed a “successful completion”. It will become apparent however that large amounts of data are unavailable for comparison. When such gaps exist the problem will be acknowledged.

Information received from the cities survey will be reviewed, cleaned and entered into the appropriate type database. Several types of analysis must be performed on the data but due to the large number of factors that will be presented in this study, an initial test to determine potential collinearity must be applied to eliminate overlap. Decisions to eliminate specific overlapping factors must be made and extraneous data eliminated. Most simply, those cases of respondents that reported subsequent firesetting behavior must be differentiated from those that did not. Analysis for both groups will be stratified at this point by city (program) and control variables pertinent to that program as well as control variables mentioned previously (age, gender, etc.). Quantification of the independent and dependent variables will allow a test for independent means (*t* test) to be calculated in that two variables are being examined for their relationship. To determine the probability that an intervention program does indeed impact recidivism rates of juvenile firesetting, $p < .05$ will be utilized.

Upon examination of the data it may become apparent that additional analysis outside the qualifications of this proposal may be utilized to extract further value from the gathered data.

Limitations

Problematic areas of the presented design include several factors. Apparently, most important among these is mortality. Relocation of individuals, incarceration for other offenses,

ageing out of the subject design and actual death all impact reporting data and is not easily accounted for. As noted, no national model for collecting, quantifying and reporting pertinent information regarding this problem has been proposed to date. Also, while sampling a representative group of metropolitan cities may relate to that context, it may not reflect nationally on the problem. However, given the magnitude and consequences of the identified problem, it becomes evident that measurable analysis must be conducted to determine appropriate public resource allocation to address the question.

End Notes

¹ Due to the distinct possibility that identified firesetters may continue the activity after intervention occurs, but may not be noted by authorities providing the program, it may prove more reliable to survey randomly selected individuals to determine recidivism.

² Educational materials are currently being amended to include the term “firesetting” instead of “fireplay” as the latter implies acceptable behavior.

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