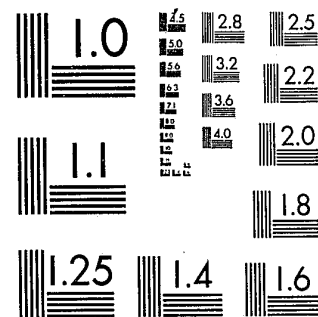


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**A PROFILE OF THE JUVENILE ARSONIST**

Submitted to:

National Institute for Juvenile Justice and Delinquency Prevention  
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## Abstract

### A Profile of the Juvenile Arsonist

The purpose of this research project is to isolate factors which discriminate among juvenile arsonists, juvenile delinquents who have committed other crimes, and juveniles who have not officially committed any crimes.

Court files were examined on the entire population of 38 arsonists referred to the King County (Washington State) Juvenile Court in 1978. Similarly, files were examined on a random sample of 105 other delinquents referred to the court in 1978. Court files indicated that 2,653 juveniles were referred to the court in 1978 for offenses other than arson.

The difference between arsonists and other delinquents was analyzed on the basis of the following sociodemographic and behavioral variables: sex, age, parents, number of siblings, location in family constellation, nature of residence, family problems, school problems, drug and/or alcohol abuse, previous crimes committed, mental and/or physical disabilities, problematic sexual behavior, and firesetting behavior. This study documented that there is not a meaningful difference between juvenile arsonists and other delinquents. The only significant difference, established for number of siblings, was considered spurious because no other similarly related variable was significant.

The minimal amount of information gathered by the design of this study indicates that more data could be made available through another method of research. Deriving demographic and social characteristics through in-depth personal interviews would provide a much better sense of the characteristics that make juvenile arsonists unique or similar to other juveniles.

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## Introduction

Arson is one of the most serious crimes that this country faces, and yet little is known about it. Available data on arson indicate that it is an extremely complex crime phenomenon that has been growing at an alarming rate. In 1977, 16,525 arrests for arson were made for all ages. Statistics on juvenile arson indicate that 8,235 arrests, or 50% of the total arrests for arson in 1977, were made for persons eighteen years old or younger.<sup>1</sup> Firesetting is a serious problem and juveniles comprise a large population of the offenders arrested for this crime. The pervasiveness of arson indicates that the criminal justice system requires a better understanding of this crime to assure a more effective means of controlling it.

## Purpose

This research project attempts to isolate factors which discriminate between juvenile arsonists and juvenile delinquents who have committed other crimes. Previous studies have attempted to determine this distinction on the basis of different factors ranging from psychological characteristics to criminal behavior. Many of these past studies suffer from methodological problems. In many instances arsonists were not compared to a control group. In other cases the population characteristics of arsonists were compared to another population. However, characteristics were not pre-selected in the other population as independent variables to determine if these variables explain firesetting.

Unfortunately, the reverse process was used. First, a population of arsonists was selected and "unique" characteristics were identified. Second, the characteristics identified in arsonists were imputed backwards to be different from those present in the other population. This project shall attempt to avoid these methodological problems and provide a sound statement regarding differences or similarities found in those juvenile delinquents who are arsonists and those who are not.

#### Literature Review

Although there were numerous articles on the subject of firesetting before the 1930's, Sigmund Freud initiated a strong interest in the subject. Originally, Freud outlined firesetting as urethral-phallic fixated drives. Freud described these drives as follows:

It is as if primitive man had had the impulse when he came in contact with fire, to gratify an infantile pleasure in respect of it and put it out with a stream of urine....Putting out fire by urinating ...therefore represents a sexual act with a man, an enjoyment of masculine potency in homosexual rivalry. Whoever was the first to deny himself this pleasure and spare the fire was able to take it with him and break it to his own service. By curbing the fire of his own sexual passion he was able to take fire as a force of nature....It is

remarkable how regular analytic findings testify to the close connection between the ideas of ambition, fire, and urethral erotism.<sup>2</sup>

Out of this characterization, firesetting research was mainly confined to studying a psychological classification.

The first in a series of major psychological studies on juveniles was conducted by Yarnell. Characteristics of sixty children who were referred to the Psychiatric Division of Bellevue Hospital were analyzed. Educational difficulties, physical disabilities, sexual problems, and family disorganization were frequently reported in the referrals examined.<sup>3</sup>

Later, Lewis and Yarnell conducted a more comprehensive study that reported on over 1300 firesetters, including 238 juveniles from 5 through 16 years of age. There were 200 juvenile males and 18 juvenile females chosen from the files of the National Board of Fire Underwriters. Also included were an additional 38 juveniles from the study that Yarnell had conducted earlier. This study, although conducted twenty-seven years ago, is still considered one of the most complete and exhaustive research efforts. The findings concluded that firesetters tended to come from families frequently disrupted by stressful marriages and alcoholism. Moreover, firesetters tended to have previous criminal histories and often suffered from physical disabilities.<sup>4</sup>

Kaufman, Heims and Reiser continued to conduct research on juvenile firesetters from a psychological perspective. However, their study attempted to challenge the classical psychological view of firesetters by broadening the psychological causes of

setting fires. Thirty boys receiving psychiatric care were examined. The subjects under study were found to be aggressive, have sexual problems, and come from families that had parents suffering from alcoholism.<sup>5</sup>

Nurcombe also studied juvenile firesetters. The juveniles reviewed were referred to a clinic or hospital for antisocial problems. A significant number of the 21 firesetters examined had problems in school, were sexually disturbed, came from distressed homes, and had past criminal histories.<sup>6</sup>

These five studies comprise most of the major psychological research on firesetting behavior. (For additional psychological studies see: Macht and Mack, 1968; Vandershall and Wiener, 1970; and Siegleman and Folkman, 1971.) All of these studies provide enormously useful insights into the psychological nature of firesetting. These studies explain that firesetters often have psychological behavior problems, live in families with marital strife, have parents suffering from alcoholism, have a history of prior delinquency, have sexual problems, and possibly suffer from some sort of physical disability. Despite these findings, these studies lack a sound methodological structure. Various patterns were uncovered, but often a control group was not used to verify the fact that these behavior problems are unique to firesetters.

A recent study, conducted under strict methodological control, indicated that it is inappropriate to assume that firesetting behavior is necessarily a serious psychological disorder.

Kafry suggests that playing with fire is not an infrequent behavior in all children. In a sample of 99 "normal" school children, 45% of these children set fires. In other words, 21% of the children in the entire sample set fires.<sup>7</sup>

#### A Revised Viewpoint

The psychological studies could not conclusively isolate firesetting behavior as a serious psychological disorder. A number of factors have been discussed that are attributed to firesetters. Nonetheless, a cogent statement is lacking. It is necessary to identify some common features that characterize a juvenile arsonist.

Suppose that behavior is largely controlled by its consequences. This conceptualization is borrowed from labeling theory. In this approach, a person often becomes the thing they are described as being. Once labeled as a deviant, the irony of control often takes effect. One of the consequences of control is the labeling of a deviant. The deviant often reacts negatively to the control mechanism with defiant deviance that only contributes to the justification for the deviant label. Thus, the consequences of deviant behavior, such as control, can contribute to more deviant behavior.<sup>8</sup>

Understanding juvenile arson, in the context of labeling theory and the interaction between individuals and their social environment, provides some useful insights. For example, fire-setting may be the consequence of a chain reaction that involves reciprocal interaction between deviant juveniles and their social

environment.<sup>9</sup>

Specifically, if a child is deprived of a father and the mother is absent much of the time to earn a living, this youngster may become involved in a sequence of deviant social development. Spilling over into other environments, this juvenile may suffer from behavior problems and other acts of social deviance. For example, a youngster may misbehave in school to attract attention. As explained earlier, this juvenile may not only be a victim of social deviance, but may also be a creator of social deviance.

Despite this example, the question still remains as to whether a specific pattern of deviance creates a juvenile firesetter or simply any one of a number of kinds of deviance. Vreeland and Waller provide a monumental literature review with excellent insight into this question. One of the most obvious and enlightening comments they make is "...the major difference between firesetters and other criminals is that firesetters set fires."<sup>10</sup>

Two steps should be initiated to discern whether juvenile arsonists are in fact different from other delinquents. First, various demographic and social characteristics discussed in the literature should be examined to determine if research uniquely characterized the nature of juvenile firesetters. Second, if there are inconclusive findings, further study should be undertaken to resolve these disputed issues.

The primary value of this research is that the two steps,

discussed above, were undertaken. This particular research project is not offered as a definitive statement on juvenile arson. It is hoped these steps will help formulate new ideas to suggest implications for developing more effective prevention efforts. For example, one response by law enforcement agencies could include training personnel to counsel children and families according to the typology that this research attempted to develop. Another strategy could rest upon prevention. Education programs could be targeted at those children, for example, in school, that exhibit potential firesetting behavior.

#### Demographic Characteristics

##### Sex Distribution

Few females have been included in the studies on firesetters. Yarnell had only four females in her study on juvenile fire-setters. Lewis and Yarnell had a sample that was 14.8% female.<sup>12</sup> Under-representation of females may lie in the fact that arson is a crime. Studying arson is limited to the way in which the legal system responds to crime. Specifically, in the past, fewer females were arrested than males.<sup>13</sup>

##### Age Distribution

In the 60 psychiatric cases in Yarnell's research on children and firesetting, a two-tiered breakdown appeared. Approximately 60% of the children between 6 and 8 years of age were active firesetters.<sup>14</sup> Another group between 11 and

16 years of age demonstrated active firesetting behavior.

Block, Block, and Folkman were able to identify fire-setting tendencies in normal children 3 to 6 years of age.<sup>15</sup> Thus, as explained earlier, children appear to pass through a stage in their early years where they exhibit an interest in fire.

#### Race

No pattern was found in the literature regarding the relationship between race and firesetting behavior. Block, Block, and Folkman observed no racial difference in children who engaged in the legitimate use of fire and those children who set fires under inappropriate circumstance.<sup>16</sup>

#### Parents

Juvenile firesetters have been found to reside in families where the father is absent. Vandersall and Wiener noted that there was a high incidence of father absence in the families of juvenile firesetters. In 50% of the subjects considered, the father was not present in the family.<sup>17</sup>

Hurley and Monohan examined criminal histories and also found that arsonists tend to come from families that lacked fathers.<sup>18</sup> Siegleman and Folkman confirmed this same family condition in their report on juvenile arsonists.<sup>19</sup>

#### Number of Siblings and Location in Family Constellation

The family environment, characterized by the number of siblings, appears to be a salient factor worth considering. Children in large families were likely to be repeat firesetters according to Siegleman and Folkman and Hurley and Monahan.<sup>20</sup>

Siegleman and Folkman also found that firesetters tended to be the first born, the last born, or the only child.<sup>21</sup>

#### Social Characteristics

##### Family Problems

Firesetters have been found to come from families that are disturbed. Kaufman, Heims, and Reimer found that there is a high incidence of parental alcoholism in families of arsonists.<sup>22</sup> Siegleman and Folkman also that parents of firesetters suffered from health and marital problems.<sup>23</sup> Although these characteristics have been uncovered, additional research into the relationship between family conditions and firesetting behavior should be undertaken.

##### School Problems

Vandersall and Wiener found that 60% of the children they studied had academic difficulties.<sup>24</sup> Siegleman and Folkman came to a conclusion similar to Vandersall and Wiener.<sup>25</sup> However, Kafry found that there was little difference between the school problems of juveniles who played with matches, juveniles who set fires, and juveniles who had no history of playing with fire.<sup>26</sup> These conflicting studies promote the need for further study of the relationship between school problems and firesetting.

##### Criminal History

A particularly interesting relationship was uncovered by McKerracher and Dacre and Hurley and Monahan. They found that, although both arsonists and non-arsonist often had past



criminal histories, arsonists committed more property crimes.<sup>27</sup> The importance of this finding is that the nature of arsonists may be less aggressive than other criminals. Yet, this characteristic remains to be more fully examined in juveniles.

#### Physical Disabilities

The social stigma applied to those individuals who have physical disabilities is a significant factor when characterizing deviance. This subject has not been given serious consideration in the literature. However, Lewis and Yarnell did report a high incidence of physical disability among their sample of firesetters.<sup>28</sup> Nonetheless, the incidence of physical disability and firesetting behavior requires further controlled study.

#### Sexual Problems

As noted earlier, Freud initiated an increased interest in firesetting behavior based on sexual motivations.<sup>29</sup> Although a control group was not used, Lewis and Yarnell found that 15 to 20% of the adults examined in their study suffered from some form of sexual deviance.<sup>30</sup>

In a study conducted on individuals in a special security hospital, arsonists were found to have more sexual problems than non-arsonists. McKerracher and Dacre found that 30% of the non-arsonists had committed sexual offenses.<sup>31</sup> Hurley and Monahan found no difference in the number of sexual crimes

committed by psychiatric prisoners.<sup>32</sup>

In addition, the psychological view of arson, stimulated by the relationship between problematic sexual behavior and firesetting, initiated research on the relationship between enuresis and firesetting.<sup>33</sup>

Yarnell found that 15% of the juveniles examined were bedwetters.<sup>34</sup> Lewis and Yarnell found that 9% of the juveniles in their study had suffered from enuresis.<sup>35</sup> Kaufman, Hemis, and Reiser and Nurcombe found that less than 50% of the subjects in their studies were bedwetters.<sup>36</sup> Siegleman and Folkman found that recidivist firesetters had a 16% rate of enuresis while non-recidivists had a 30% rate of enuresis.<sup>37</sup>

Many of the populations examined in the above studies were a select group of individuals. This makes it difficult to conclude that arsonists are less likely to be a unique type of offender or suffer from some particular phenomena. The special association between juveniles and the presence or absence of specific characteristics cannot be confirmed until a more complete comparison to the general population is made. Certainly it cannot be surmised that any one of the characteristics discussed predispose a juvenile to set fires. Nonetheless, if all of these characteristics interact together, they may produce a stressful environment which stimulates deviance. Whether these characteristics contribute to firesetting in particular should be tested further by comparing a population

of juveniles who have committed arson with juveniles who have committed other crimes.

In light of the universal interest of fire among children, it is difficult to judge whether juvenile firesetters are altogether significantly different from other juvenile delinquents. The available information on juvenile arsonists suggests that there is a lack of clearly unique characteristics that can be attributed to juvenile arsonists. Such a conclusion suggests that the design of prevention efforts should appeal to a wide cross-section of juveniles.

#### Research Methodology

This is an ex post facto research study because arsonists cannot be studied unless they are apprehended for firesetting. This investigation started with a set of juvenile arsonists that were characterized as a dependent variable. Various factors affect the behavior of these subjects. These factors can be characterized as independent variables. This study tried to determine whether a specific pre-set number of independent variables have affected the dependent variable.

In this research project, an attempt was made to minimize the lack of control found in ex post facto research. First, the subjects chosen from Washington's King County Juvenile Court were randomly selected. However, these subjects were pre-selected since the random selection was made from

individuals referred to the Juvenile Court.

#### Setting

Demographic and social characteristics found in children referred to the Juvenile Court were recorded in court files. This source was readily available at a low cost with high information returns. Therefore, ex post facto survey research was conducted on secondary sources.

#### Limitations

There are several limitations in this research study. First, the subjects in the Juvenile Court cohort have been pre-selected since they are only a population of individuals referred to the Juvenile Court.

Second, in this study reliance on Juvenile Court referrals determined delinquency, not convictions by the Juvenile Court. Although court records contain the greatest wealth of social and demographic information on juvenile delinquents, several problems affect this research project if delinquents are defined as referrals. To begin with, unknown delinquency was not recorded in this study. Court files contain a history of officially recorded illegal conduct. There are extra-judicial interactions, for example, with the police. In many cases, an apprehended juvenile is released for numerous reasons including the fact that the parents will discipline the youth or the victim will refuse to prosecute. In addition, offenses occur that remain hidden and escape any official record.



Third, in conjunction with these problems, if juvenile referrals are defined as delinquents, those who are innocent will become part of the delinquent cohort. However, in a study conducted by Marvin Wolfgang et. al. they stated that "...there is a slight chance that an offense of which he (a delinquent) is not guilty may be recorded against him, but there is a much greater likelihood that...records will inadequately show...real involvement in delinquency."<sup>38</sup> Although this is less than satisfactory, it is assumed that these circumstances prevail in King County, and all subjects that were actually referrals in this study were considered to be delinquents.

Fourth, the Juvenile Court data used in this study were taken from case files. This information may not be complete or accurate.

#### Sample

Juveniles comprise the population considered in this study. This population is an unlistable population. Therefore, two sub-populations were specified within the population of juveniles. These two sub-populations included; 1) juvenile delinquents who have committed arson and 2) juveniles who have committed other crimes. The characteristics of these two sub-populations could not be easily ascertained. This made it difficult to state whether each sub-population was homogeneous or heterogeneous. Therefore, based on this determination the

two sub-populations were examined as described below.

Data on juvenile arsonists was taken from those juveniles referred to the King County Juvenile Court. There were 38 subjects referred during 1978. The total population of juveniles referred for arson during 1978 were examined for this study.

A random sample of all other juveniles referred to the Juvenile Court in 1978 were also examined. Unfortunately, there were not any exact figures for the number of youngsters referred to the Juvenile Court. Court files indicated that 2,635 juveniles were referred to the court for offenses other than arson. This figure represents a hand count of the files present in the juvenile court record room at the time this study was conducted. Although this figure leaves much to be desired, it is the most accurate assessment available to determine the number of juveniles referred during 1978.

Assuming the population of non-arsonist court referrals in 1978 was 2,653, a random sample of 105 subjects who committed crimes other than traffic or status offenses were examined. This sample size was required for a 95% statistical confidence interval with a reliability of plus or minus 10%.

#### Analysis

Except for the variable on the number of siblings in a delinquent's family, no statistically significant relationship was found between arsonists and other delinquents. A review

of the data on juvenile arsonists and other delinquents revealed that only a small number of subjects were reported for each variable. Nonetheless, the analysis did capitalize on: the meaningful data available, the useful number of responses for each variable, and the helpful control that the category of other delinquents placed on the analysis of arsonists.

Despite the problems that were found in the data, it was possible to draw a meaningful conclusion. In the variables where meaningful data were available, it should cautiously be suggested that no significant difference exists between arsonists and other delinquents. Caution is required because there were instances where this conclusion was made when there were several values missing, and because the sample only included 143 subjects. Nonetheless, the results of this study verify the same reasoning that is described in the literature review. That is, the only differences between juvenile arsonists and other delinquents is that arsonists set fires. Since juvenile arsonists were not found to have unique characteristics, the design of law enforcement efforts should appeal to a wide cross-section of juveniles.

#### Recommendations

When constructing this study, variables were selected on the basis of past studies that successfully gathered similar information. Nevertheless, as mentioned earlier, using a

secondary source for this study compounded the problems found in this data. Therefore, the problems demonstrated by this demographic study on arsonists indicate that the data are not available through this method of research. Deriving demographic and social characteristics through in-depth personal interviews would improve the sense of the type of characteristics that make juvenile arsonists unique or similar to other juveniles.

#### Conclusion

In conclusion, this study does document that there is not a meaningful difference between juvenile arsonists and other juvenile delinquents. This is a preliminary finding given the fact that many of the variables analyzed had few numbers of subjects for clear descriptions and strong conclusions. Hopefully, a new study, based on the above suggested improvements in the research design, would make advancements on the meaningful conclusions drawn from this analysis.

## Notes

1. Uniform Crime Reports, 1977. U.S. Federal Bureau of Investigation 1977, p. 182.
2. Sigmund Freud, "The Acquisition of Power Over Fire," The International Journal of Psycho-Analysis, October 1932, p. 405.
3. Helen Yarnell, "Firesetting in Children," American Journal of Orthopsychiatry, 1940, 10: 262-268.
4. N.D.C. Lewis and H. Yarnell, "Pathological Firesetting (Pyromania)," Nervous and Mental Health Disease Monograph, 1951, 82: 8-26.
5. Irving Kaufman, Lora W. Heims, and David E. Reiser, "A Re-evaluation of the Psycho . Dynamics of Firesetting," American Journal of Orthopsychiatry, 1961, 31: 269-283.
6. B. Nurcombe, "Children Who Set Fires," Medical Journal of Australia, April, 1964, p. 579-584.
7. D. K fry, Fire Survival Skill: Who Plays with Matches? USDA Forest Service Paper Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 1978, p. 27.
8. Edwin M. Schur. Labeling Deviant Behavior, New York, Harper and Row, 1971, p. 37-82.
9. G.R. Patterson, "The Aggressive Child: Victim and Architect of a Coercive System," Behavior Modification and Families, New York, Brunner/Mazel, 1976, p. 267-316.

10. Robert G. Vreeland and Marcus B. Waller. The Psychology of Firesetting: A Review and Appraisal, Center for Fire Research, National Bureau of Standards, 1978, p. 33.
11. Helen Yarnell, Op. Cit. p. 274.
12. N.D.C. Lewis and H. Yarnell, Op. Cit.
13. T.P. Monahan, "Police Dispositions of Juvenile Offenders: The Problem of Measurement and a Study of Philadelphia Data," Phylon, 1970, 31: 129-141.
14. H. Yarnell, Op. Cit., p. 274.
15. Jeanne H. Block, Jack Block and William S. Folkman, Fire and Children: Learning Survival Skills. USDA Forest Service Paper, Southwest Forest Ranger Experiment, Berkeley, California, 1976, p. 11.
16. Jeanne H. Block, Jack Block and William S. Folkman, Op. Cit., p. 5.
17. T.A. Vandersall and J.M. Wiener, "Children Who Set Fires," Archives of General Psychiatry, 1970, 22: 63-71.
18. W. Hurley and T.M. Monahan, "Arson: The Criminal and the Crime," British Journal of Criminology, 1969, 9: 129-141.
19. E.Y. Siegelman and W.S. Folkman, Youthful Firesetters: An Exploratory Study in Personality and Background, Springfield, Virginia, USDA Forest Service Research Note PSW - 230, 1971, p. 2-3.

20. E.Y. Siegelman and W.S. Folkman, Op. Cit. and W.Hurley and T.M. Monahan, Op. Cit., p. 13.
21. E.Y. Siegelman and W.S. Folkman, Op. Cit.
22. Irving Kaufman, Lora W. Heims, and David E. Reiser, Op. Cit., p. 128.
23. E.Y. Siegelman and W.S. Folkman, Op. Cit., p. 2-3.
24. T.A. Vandersall and J.M. Wiener, Op. Cit.
25. E.Y. Siegelman and W.S. Folkman, Op. Cit., p. 6.
26. D. Kafry. Op. Cit., p. 55.
27. D.W. McKerracher and A.J.I. Dacre, "A Study of Arsonists in a Special Security Hospital," British Journal of Psychiatry, 1965, 112: 1151 and W. Hurley and T.M. Monahan, Op. Cit., p. 5-6.
28. N.D.C. Lewis and H. Yarnell, Op. Cit.
29. Sigmund Freud, Op. Cit.
30. N.D.C. Lewis and H. Yarnell, Op. Cit.
31. D.W. McKerracher and A.J.I. Dacre, Op. Cit., p. 1152.
32. W. Hurley and T.M. Monahan, Op. Cit., p. 5-6.
33. Sigmund Freud, Op. Cit.
34. Helen Yarnell, Op. Cit., p. 285.
35. NDC Lewis and Helen Yarnell, Op.Cit.
36. Irving Kaufman, Lora W. Heims, and David E. Reiser, Op. Cit., p. 126 and B. Nurcombe, Op. Cit., p. 584.
37. E.Y. Siegelman and W.S. Folkman, Op. Cit., p. 3.

38. Marvin E. Wolfgang, Robert M. Figlio, and Thorsten Sellin, Delinquency in Birth Cohort, 1970, p. 22.

## TABLES

## I. Demographic Characteristics:

Hypothesis #1. The sex distribution of arsonists is different from other delinquents.

Table I

Sex distribution	Arsonists	Other delinquents	Chi-square analysis:
Male	28	77	
Female	10	28	
Missing values	0	0	significance =
Total	38	105	.86
N=143			p<.05

No significant difference was found between arsonists and other delinquents on the basis of sex.

Hypothesis #2. The age distribution of arsonists is different from other delinquents.

Table II

Age:	Arsonists	Other delinquents	Difference in means analysis:
Average age	15.3	15.1	
T-value			
Missing values	0	0	significance
Total	38	105	.75
T-value = .29			p<.05
N = 143			

No significant difference was found between arsonists and other delinquents on the basis of age.

Hypothesis #3. The type of parents arsonists have are different from other delinquents.

Table III

Parents:	Arsonists	Other delinquents	Chi-square analysis:
No evidence of parents	2	6	significance .26 p<.05
Natural mother and father	19	46	
Natural mother only	4	18	
Natural mother/spouse other than youth's father	3	17	
Natural father only	3	2	
Natural father/spouse other than youth's mother	2	3	
Friends	0	1	
Relatives	0	3	
Both adoptive parents	2	1	
Other/combination of above	1	3	
NA missing values	2	5	
Total	38	105	
N=143			

No significant difference was found between arsonists and other delinquents on the basis of type of parent. Since many of the categories had expected values of less than 5, classifications were combined in several different ways. For example, the missing values category was omitted and all other categories were combined, except natural mother and father. Nonetheless, a statistically significant relationship could not be established in any of the combinations.

Hypothesis #4. The number of siblings in an arsonist's family is different from the number of siblings found in families of other delinquents.

Table IV

Number of siblings:	Arsonists	Other delinquents	Difference in means analysis:
Average number	3.4	2.0	
Missing values	0	0	significance=
Total	38	105	.002
T value=3.44			p<.05
N=143			

A significant difference was found. Arsonists tend to have more siblings than other delinquents. This is a particularly curious finding since there were not any significant differences found in any of the other variables examined in this study. Further consideration of this finding is presented in the discussion under hypothesis number 5.



Hypothesis #5. The location of an arsonist in his/her family's constellation is different from other delinquents.

Table V

Location in family constellation	Arsonists	Other delinquents	Chi-square analysis:
Only child	3	3	
Oldest child	8	20	
Youngest child	4	22	significance
Missing values	23	60	.32
Total N=143	38	105	No significant difference p<.05

No significant difference was found between arsonists and other delinquents on the basis of location in the family constellation. This finding is weak because there were many categories with expected values of less than 5 and 58% of the values were missing. Classifications were combined in an attempt to derive a statistically significant relationship. Nonetheless, a statistically significant relationship could not be established.

Although this is purely speculative, since hypothesis number four was significant, it would appear likely that hypothesis number five would also be significant. It is likely that the number of siblings and the location in the family constellation would be both either significant or not significant. In this study, one variable was significant and all the other variables examined were not significant. The contradictory results in this study appear to indicate that the significant relationship found in the variable on the number of siblings may be a spurious finding.

Hypothesis #6. The nature of a juvenile arsonist's residence is different from other delinquents.

Table VI

Nature of residence:	Arsonists	Other delinquents	Chi-square analysis:
Natural family home	25	61	
Other	13	27	
Total N=126	38	88	significance: .85 p<.05

No significant difference was found between arsonists and other delinquents on the basis of residence. Many of the categories in the original breakdown for this variable had expected values of less than 5. To resolve this problem, classifications were combined, as shown above, and the missing values category was omitted. Nevertheless, there was still a finding of no significance.

## II. Social Characteristics

Hypothesis #7. Family problems of arsonists differ from those of other delinquents.

Table VII

Family problem:	Arsonists	Other delinquents	Chi-square analysis:
Separation/divorce	12	24	
Other	13	20	
Total	25	44	
N=69			significance=.78

No significant difference was found between arsonists and other delinquents on the basis of family problems. Many of the categories in the original breakdown for this variable had expected values of less than 5. Moreover, 52% of the values were missing. To resolve this problem, classifications were combined, as shown above, and the missing values category was omitted. Nevertheless, there was still a finding of no significance.

Hypothesis #8. School problems of arsonists differ from those of other delinquents.

Table VIII

School problems:	Arsonists	Other delinquents	Chi-square analysis:
School or classroom behavior problems	4	2	
Academic difficulties	4	7	
Expulsion from school	0	2	
Irregular school attendance	1		
Other/combination of above	9	12	
Total	18	23	
N=41			significance=.26 p<.05

No significant difference was found between arsonists and other delinquents on the basis of school problems. This conclusion must be tempered by the fact that 67% of the values were missing for this variable. Moreover, the resulting collapsed table has classifications with expected values of less than 5. The missing values category was omitted to try and establish a significant difference. However, no such difference could be established.

Hypothesis #9. There is a difference between the substance abuse problems of arsonists and other delinquents.

Table IX

Substance abuse:	Arsonists	Other delinquents	Chi-square analysis:
Only alcohol abuse	2	8	
Only drug abuse	2	8	
Both drug and alcohol abuse	3	4	significance=
Missing values	31	85	.70
Total	38	105	p<.05
N=143			

No significant difference was found between arsonists and other delinquents on the basis of substance abuse problems. This variation suffers from many inadequacies. There were many categories with expected values of less than 5 and 81% of the values were missing. Moreover, analysis of the results without the missing values category still resulted in no significant difference.

Hypothesis #10. There is a difference in the type of previous crimes committed by arsonists and other delinquents.

Table X

Previous crimes committed:	Arsonists	Other delinquents	Chi-square analysis:
Personal crimes	3	3	
Property crimes	8	14	
Both	3	4	significance=
Total	14	21	.82
N=35			p<.05

No significant difference was found between arsonists and other delinquents on the basis of the type of past crimes committed by these offenders. This conclusion must be stated cautiously since 74% of the values were missing for this variable. Moreover, the resulting collapsed table has classifications with expected values of less than 5. The missing values category was omitted to try and establish a significant difference between the offenders reported; however no significant difference was established.

Hypothesis #11. There is a difference between the type of disabilities found in arsonists and those found in other delinquents.

Table XI

Type of disability:	Arsonists	Other delinquents	Chi-square analysis:
Physical disability	4	4	
Mental disability	4	2	
Total	8	6	significance=
N=14			.47
			p<.05

No significant difference was found between arsonists and other delinquents on the basis of type of disability. This conclusion is tenuous since 89% of the values were missing for this variable. Moreover, many of the categories in Table XI have expected values of less than 5. The missing values category was omitted to try and establish a significant difference; however, no such difference could be established.

Hypothesis #12. There is a difference between the type of problematic sexual behavior found in arsonists and that found in other delinquents.

Table XII

Problematic sexual behavior:	Arsonists	Other delinquents	Chi-square analysis:
Molesting children	1	0	significance=
Promiscuity	1	1	.10 (inconclusive)
Prostitution	1		p<.05
Exposing	0	1	
Other/combination of above	0	1	
Missing values	35	102	
Total	38	105	
N=143			

No significant difference was found between arsonists and other delinquents on the basis of problematic sexual behavior. This is actually an inconclusive finding because 96% of the values were missing for this variable.

**END**