

**Juvenile Firesetting: An Exploratory Analysis**

by

**Michael Lawrence Slavkin**

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JUVENILE FIRESETTERS: AN EXPLORATORY ANALYSIS

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Submitted to the faculty of the School of Education  
in partial fulfillment of the requirements  
for the degree  
Doctor of Philosophy  
in the Department of Counseling and Educational Psychology  
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Announcement Page

Announcing the  
Final Examination of  
Michael Lawrence Slavkin  
for the  
Degree of Doctor or Philosophy in the Department of  
Counseling and Educational Psychology  
Friday June 30, 2000 3:00 p.m.  
School of Education, Room 4112

Dissertation: Juvenile Firesetting: An Exploratory Analysis

This study had two primary purposes. First, this study assessed the psychometric properties of the FEMA forms (Fineman, 1997a, 1997b, 1997c), inventories used by the Federal Emergency Management Agency (FEMA) to assess recidivism in juveniles. Second, this study initiated preliminary analyses between variables that (1) contributed to the identification of a typology of firesetters, (2) predicted the severity of fires set by juveniles, and (3) predicted the likelihood of recidivistic behaviors in juvenile firesetters. This study was performed with a limited range of exploratory predictors; including age, sex, delinquency, social skills, and psychopathology. It was expected that certain individual and environmental characteristics would relate to varying levels of damage caused by the fire, and the presence or absence of recidivistic behaviors. However, individual characteristics (delinquency, social skills, and psychopathology) were better predictors of recidivism, the magnitude of fire damage and the typology of firesetter.

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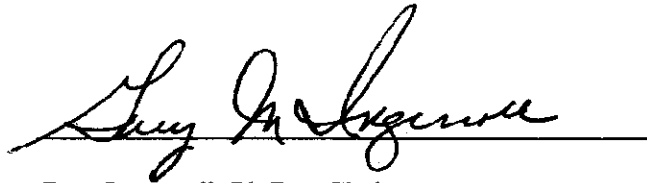
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Acceptance Page

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Abstract

This study had two primary purposes. First, this study assessed the psychometric properties of the Federal Emergency Management Agency (FEMA) questionnaires used to record juvenile firesetting events (Fineman, 1997a, 1997b, 1997c). Second, this study initiated preliminary analyses that (1) contributed to the identification of a typology of firesetters, (2) account for variance in the severity of fires set by juveniles, and (3) predicted the likelihood of recidivistic behaviors in juvenile firesetters. Predictors were restricted to a limited set of exploratory variables; including age, sex, delinquency, pathology, and social skills. However, individual characteristics (delinquency, social skills, and psychopathology) were better predictors of recidivism, the magnitude of fire damage and the typology of firesetter.

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## CHAPTER ONE INTRODUCTION

### Purpose and Rationale

Jackie and Jordan, four- and five-year-olds growing up in downtown Indianapolis, were left alone to play in their bedroom on a Friday evening after dinner. Thirty minutes later, the smell of smoke and the screaming of children filled the house. Jackie and Jordan's parents, downstairs at the time of the fire, were only able to save their youngest children as they escaped their burning home. Within 10 minutes, everything they owned was destroyed and Jackie and Jordan were dead, the result of playing with a lighter the children took from their father.

### Scope of the Problem

Each year, fires set by juveniles account for a large portion of fire-related public property damage and deaths. Fires set by children and adolescents are more likely than any other household disaster to result in death (National Fire Protection Association, 1999). In 1998, it was estimated that fires set by children and juveniles resulted in 6,215 American deaths, another 30,800 injuries, and two billion dollars in property damage (National Fire Protection Association, 1999). During the same timeframe in Marion County, Indiana alone, juveniles set 81 fires; resulting in \$650,000 in damage, 21 critical injuries, 6 civilian fatalities, and 2 fire fighter fatalities (State Emergency Management Agency, 1999).

Despite the costs and impact of juvenile firesetting, it remains a little studied area of research. What limited research that does exist is dominated by a psychodynamic perspective. In her seminal work, Yarnell (1940) attributed maladaptive firesetting to a conflicted ego identity, sexual dysfunction during the process of maturation, and the outcome of sexual abuse. Few

investigations of firesetting have been conducted using an alternative theoretical stance.

Research on juvenile firesetting also has been hampered by methodological and statistical limitations. Examinations of juvenile firesetting have been based on data from case studies or from research using projective instruments, which are of limited generalizability. These studies project an image of juvenile firesetters as a uniform group, not acknowledging wide intragroup differences among the forms of firesetting and the magnitude of fire damage. Studies of juvenile firesetting typically depend upon data drawn from hospitalized or institutionalized samples. The reliance on samples of hospitalized or institutionalized firesetting youths reinforces the stereotyped perception that most juvenile firesetters are psychologically disturbed. Both of these methodological constraints affect the ways in which youthful firesetters are viewed by professionals in fire service, mental health, and education.

#### Purpose of the Study

The purpose of this study was to investigate individual and environmental factors that contribute to the form and risk of continuation of firesetting in juveniles. The researcher utilized data taken from a county-based dataset on child and adolescent firesetters. The Marion County Arson Investigation Network (MCAIN) is a countywide database compiled by fire professionals who investigate incidents of firesetting within Indianapolis and Marion County, Indiana.

The database is a subset of the Federal Emergency Management Agency's (FEMA) database on juvenile firesetters. By acquiring information on firesetters from MCAIN, the researcher sought to acquire a more representative sample of firesetting juveniles. MCAIN's use of a series of standardized measures to collect information from both the firesetter and family members (Fineman, 1997a, 1997b, 1997c) is an improvement over previous research, which has



focused solely on case study or interview data.

Site selected for the evaluations. Data from MCAIN were gathered as part of a national data program under the aegis of FEMA, the national organization responsible for collecting information on firesetting. Though geographically restricted, the data are assumed to offer broader generality. The State of Indiana's death rate per capita as a result of fire ranks at the median by state for the United States, with 15.8 people being killed per million citizens (National Fire Protection Association, 1999).

MCAIN has collected information on all fires reported in the Indianapolis area and Marion County since 1993. As such, the dataset does not suffer the limits of previous studies that have relied on hospitalized or institutionalized samples. However, the MCAIN sample of firesetters is not without its constraints; inclusion occurs only when the identity of the juvenile firesetter is determined. As with any intact data set, analysis is restricted to only those data points collected.

Data from this dataset provided information on juveniles who have set fires in the MCAIN geographic area during the previous 6 years (1994-1999). The researcher used the following as dependent variables: (1) the magnitude of fire damage (based in dollar amount lost due to fire), (2) the presence of recidivism, and (3) the typology of firesetters as functions of individual characteristics (e.g. - aggression, delinquency, externalization of emotions) and environmental circumstances (e.g. – family problems, school problems, peer problems).

#### Conceptual Framework of Study

Juvenile firesetting remains an understudied area. The last significant review by Kolko (1985) concluded that the individual's personality characteristics, in addition to the juvenile

firesetter's environment, related to firesetting and recidivism. In the years since the Kolko (1985) review, limited additional research has occurred (also see Barnett & Spitzer, 1994).

Most attention to firesetting has been subsumed within broader categories of delinquency and aggression in children (Kazdin, 1990). However, no separate review of firesetting from a developmental framework has been performed. It is believed that juvenile firesetting, much like other forms of delinquency and aggression in juveniles, can be explained as examples of problem behaviors.

Firesetting can be classified as one of many examples of problem behavior that has been identified in juveniles. In proposing his problem-behavior theory (Jessor, 1987; Jessor & Jessor, 1984), Richard Jessor asserts that most juvenile problem behaviors can be explained by an examination of the particular characteristics and experiences of juveniles (individual characteristics) within the contexts defined by a larger society or culture (environmental characteristics). In order for social scientists to understand a problem behavior, individual factors and environmental factors must be examined, in addition to the attributes of the situation in which the problem behavior takes place (Jessor, 1981; Jessor & Jessor, 1973).

Jessor, Graves, Hanson, & Jessor (1968) identified three systems of psychosocial influence that lead to problem behaviors in juveniles: the individual system, the environment system, and the behavioral system. Jessor (1987) states

Within each of the three systems, the explanatory variables generate a dynamic state called proneness, which specifies the likelihood of occurrence of normative transgression or problem behavior. Problem behavior is defined as behavior that departs from the norms – both social and legal – of the larger society; it is behavior that is socially disapproved by institutions of authority and that tends to elicit some form of social control response whether mild reproof, social rejection, or even incarceration (Jessor, 1987, p. 332).

Proneness is thought to be synonymous with the propensity to engage in problem behavior. While proneness can be identified as being related to specific individual, environmental, or behavioral events; it is generally reviewed as a global, psychosocial risk factor (Jessor et al., 1968).

Jessor and Jessor (1973, 1977) also assert that problem behavior theory emphasizes the dynamic and systemic interaction between individuals and their environments. Like Lewin's (1951) field theory, problem behavior theory is an interactional model that asserts causal priority cannot be attributed solely to either individual or environmental characteristics. To explain a problem behavior as complex as firesetting, both individual and environmental predictors must be examined simultaneously (Magnusson & Endler, 1977).

Individual characteristics are defined as social and cognitive experiences that occur throughout development, and often reflect social meanings, values, expectations, and orientations toward self and others (Jessor, 1987). Individual characteristics that were examined in the present study include an affinity toward aggression, an affinity toward delinquency, and an externalization of emotions. Environmental characteristics are defined as supports, controls, models and expectations of others that are thought to be meaningful phenomena to juveniles (Jessor, 1987). Environmental controls that were examined in the present study include family problems, school problems, and peer problems.

In previous studies of deviancy, marijuana use, drug use, cigarette smoking, sexual intercourse, and alcohol use problem-behavior theory has accounted for approximately 50 to 60 percent of the variance in composite measures of juveniles' problem behaviors (Donovan & Jessor, 1978; Donovan & Jessor, 1985; Jessor, 1987; Jessor et al, 1968; Jessor, Chase, &

Donovan, 1980; Jessor & Jessor, 1984; Rachal, Guess, Hubbard, Maistro, Cavanaugh, Waddell, & Benrud, 1980). For the purposes of the present research study, the researcher identified factors that were thought to influence firesetting in youth. Exploration of these factors and their relations to the maladaptive behavior patterns of these children and adolescents has implications for better recognizing the developmental patterns that lead to juvenile firesetting.

The present study's emphasis on developmental factors that contribute to the initiation or continuation of juvenile firesetting has implications for the ways in which parents, educators, and counselors work with these youth. By acquiring information on firesetters from the MCAIN datafile, the researcher sought to acquire a more representative perspective of juvenile firesetters. It is hoped that using this dataset will assist with the community's understanding of this problem, as well as improve the programming designed to intervene on behalf of these youth.

#### Hypotheses of the Study

This study investigated the following hypotheses:

1. The presence of enuresis and cruelty to animals in juvenile firesetters will be related to recidivistic firesetting.
2. The magnitude of fire damage will be predicted by individual and environmental factors, with environmental factors being found to be better predictors.
3. The presence of recidivism will be predicted by individual and environmental factors, with individual factors being found to be better predictors.
4. The typology of the juvenile firesetter will be predicted by individual and environmental factors, with environmental factors being found to be better predictors.
5. A developmental pattern will be identified with juvenile firesetters, with early

childhood and child firesetters being predicted more with environmental factors, while adolescent and young adulthood firesetters being predicted more with individual factors.

6. Firesetting in young children is more likely to result in greater destructiveness to property than the firesetting of any other age group.

#### Limitations of the Study

Limitations of the study were:

1. No observational data of firesetters' families, schools, or peer environments were collected. Moreover, no observational data were collected on juveniles' level of aggression, delinquency, or externalization of emotions.
2. The MCAIN database is not the entire universe of Marion County's firesetters.
3. Data only were collected on those referred to MCAIN's Fire Stop program.
4. Data were limited in that they are constrained by only those questions asked by MCAIN.

#### Summary

Juvenile firesetters represent a population of significant social concern; current understanding of this population is limited. This study explored the relationships among individual and environmental variables and firesetting during early childhood and adolescence. The theoretical context that describes this population is closely aligned with Jessor and Jessor's problem behavior theory (Jessor & Jessor, 1984). The significance of the problem as a characteristic of atypical development also is reviewed.

Chapter 2 contains a review of the psychological, sociological, and criminological

literature on firesetting in juveniles. Related fields of literature are discussed, as are the results of studies relating firesetting in youth with the literature on aggression and family context.

Chapter 3 delineates the character of the existing data set and strategies for analysis, as well as the use of quantitative methodology in the study. The relationship between the research questions and the problem is established. The data collection sample is described, as is the instrumentation that was used.

Chapter 4 provides a discussion of the reliability and validity of the Federal Emergency Management Agency instruments (Fineman, 1997a, 1997b, 1997c), forms used by the federal government since 1984, but which have never been investigated as to their effectiveness in identifying firesetting.

Chapter 5 provides a general discussion of the results of the study, including the first identified review of firesetting from a developmental context.

Chapter 6 summarizes these results and relates them to the present state of the field. This chapter also includes a discussion of future directions that research needs to take in looking at juvenile firesetting.

## CHAPTER 2 REVIEW OF THE LITERATURE

### Overview

The purpose of this chapter is to review the existing literature on juvenile firesetters, focusing first on the individual characteristics related to firesetting in youth, and second on the environmental contexts that can be used to predict juvenile firesetting. This chapter also examines the contribution of individual and environmental characteristics to (1) the magnitude of damage caused by fire, (2) the presence of firesetting recidivism, and (3) the typology of juvenile firesetters.

### Juvenile Firesetting

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. It is more appropriate to distinguish among types of juvenile firesetters. Previous classifications of juvenile firesetters have been based on individual characteristics (e.g., personal motives, physical problems, interpersonal ineffectiveness/skills deficits, and covert antisocial behavior excesses) as well as environmental characteristics (e.g., limited supervision and monitoring, parental distance and uninvolved involvement, parental pathology and limitations, and presence of crisis or trauma.) (Kolko & Kazdin, 1992). An adequate understanding of juvenile firesetting is contingent upon the simultaneous examination of individual and environmental factors (Barnett, Richter, Sigmund, & Spitzer, 1997).

### Psychoanalytic Orientation

When examining motivating forces behind juvenile firesetting, many reviews have relied on a psychoanalytic orientation (Kaufman, Heims, & Reiser, 1961; Lester, 1975; Rothstein, 1963; Yarnell, 1940). Those writings are largely based upon Freud's (1932) assertion that firesetting in youth is a regressive retreat to "primitive man's" desire to gain power and control over nature. In Civilization and its Discontents, Freud (1930) states:

In man's struggles to gain power over the tyranny of nature, his acquisition of power over fire was the most important. 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 into 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 eroticism (Freud, 1930, p. 50).

Since this original publication in 1930, Freud's perception of the youthful firesetter has guided the firesetting literature with the perception that juvenile firesetting is an ego-oriented conflict that seeks removal of man's sublimation to nature's rule.

In her seminal work on juvenile firesetters, Yarnell (1940) examined 60 cases of juvenile firesetters from patients admitted to the psychiatric division of Bellevue Hospital New York. Yarnell (1940) asserted that firesetting in juveniles is the result of (1) castration fears, (2) enuresis, and (3) the influence of the mother figure in the life of the child.

Yarnell speculated that youth who set fires do so in order to gain power over adults. She also emphasized the neglectful nature of the relationships between mothers and their sons. Yarnell examined juveniles' relationships with fathers as they related to professional issues, such



as for children whose fathers are fire professionals. The author supported Freud's view that these juvenile firesetters have difficulty with enuresis and cruelty to animals and to others (Yarnell, 1940).

The ego triad. Yarnell proposed an ego triad among juvenile firesetters that linked the co-occurrence of enuresis, cruelty to animals and others, and firesetting in youth. Reports of the comorbidity of these behaviors and its predictive power in identifying adult criminal behavior has been verified in a number of studies performed following Yarnell (Lester, 1975; Prentky & Carter, 1984; Robbins & Robbins, 1967; Rothstein, 1963; Wax & Haddox, 1974).

It is not surprising that these three behaviors were identified simultaneously in juveniles who set fires; the studies that validated the triad were performed using institutionalized samples. Moreover, these reports were based on case study reviews and data extrapolated from projective instruments (Kaufman et al., 1961; Lester, 1975; Macht & Mack, 1968; Quinsey, Chaplin, & Upfold, 1989; Rothstein, 1963).

Juvenile firesetters are more likely than other groups of juveniles to have been cruel to children or animals as well as have difficulties with enuresis (Quinsey, Chaplin, & Upfold, 1989; Sakheim & Osborn, 1999; Sakheim, Osborn, & Abrams, 1991; Saunders & Awad, 1991), although the predictiveness of these factors is limited (Blumberg, 1981; Heath, Gayton, & Hardesty, 1976; Showers & Pickrell, 1987). Justice, Justice, and Kraft (1974) questioned whether the ego triad is an adequate system of identification in predicting violent behavior in adulthood. The authors assert that the ego triad largely is identified as occurring simultaneously with factors that may be better predictors of violent adult behaviors. The presence of individual characteristics, such as fighting, temper tantrums, school problems, and truancy, in combination