

Female Arsonists: A Clinical Study

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This paper is a detailed study of a sample of 15 female arsonists. A review of the literature suggests that arson is seen more frequently in males with female firesetters usually comprising 10 to 18% of the samples of firesetters studied. As a result, female arsonists have been studied less often, and only a few authors have reported on their clinical features. This retrospective study demonstrates that female arsonists do not fall in any particular age group and are mostly either single or separated. Some psychosexual aspects of their behavior also appear to be clinically relevant. In contrast to previous studies, they were more often diagnosed as personality disordered and an association with suicidal behavior was found. Their motivations for the firesetting behavior were also considered. Finally, this paper compares some demographic, clinical, and other differences between male and female arsonists. The study also suggests that poor impulse control may be a prerequisite to this type of criminal behavior. The identification of psychopathic traits in the arsonist has important medico-legal implications.

Most clinical studies of female firesetting were reported during the nineteenth and early twentieth century, and since that time this subject has been neglected.^{1,2} It appears that the reported incidence of female firesetting has changed significantly since then, although the reasons for this remain uncertain and may be due to methodological and reporting discrepancies in the studies. Monkemoeller (1912) found a 37 percent incidence of female firesetters in his review of the literature.^{1,3} Marc, surveying cases of arson committed in Paris between 1825 and 1832 reported a 34 percent inci-

dence of female perpetrators.³ Schmid (1914) reviewed a series of firesetters from Switzerland and found 35 percent were females.³ Out of a sample of over 300 mentally abnormal firesetters, Fleszar-Szumigajowa⁴ discovered 21.7 percent were females. A 14.8 percent incidence of female firesetters was reported by Lewis and Yarnell,³ and this is more in agreement with the current available data, where the proportion of female firesetters usually varies between 10 and 18 percent.^{1,5-7} In a group of 50 adult arsonists, Yesavage et al.⁸ found only 4 percent were females, but their sample selection from both mentally ill and criminal populations may have been biased. Overall, firesetting is considered predominantly a male activity.^{1,3,4,6,7-12}

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It has been hypothesized that this is the result of males responding to frustration with aggression manifesting in firesetting behavior.⁶

Firesetting in females occurs mostly during late adolescence and middle age.^{3, 9, 12} The recidivism rate is largely unknown but has been reported as approximately 13 percent in the study by Lewis and Yarnell.³ The motives for firesetting by females are very similar to their male counterparts, but can be more dangerous and dramatic.^{3, 9, 12} They most frequently engage in revenge firesetting, simultaneously aiming at attracting attention and appearing heroic.^{1, 3, 9, 12} Symbolically, the firesetting activity may represent a woman's aggressive desire to destroy her husband or lover.^{9, 12} Masochistic traits are also evident in this behavior.^{3, 12} Female adolescents are found to have more concrete motives, such as a protest against parental authority or a desire to attract attention.³

Women usually set fire to property which is invested with emotional meaning, such as their own home.^{3, 4, 9} In Tennent *et al.*'s¹ study of female arsonists, 69 percent of the firesetting involved their immediate living area, and 39 percent of the offenses directly involved property representing a conflict with authority. Several authors have commented on early environmental factors being associated with female firesetting including a high incidence of parental separation and the absence of or poor parental identification.^{1, 9, 13} Findings from a controlled study of 34 arsonists conducted by Bradford⁵ suggested that

the lack of family cohesiveness was an important predictor of arson. Psychosexual difficulties were also found to be important.^{1, 3, 9, 10, 14} A background of promiscuity is a factor cited in female firesetting.^{1, 3, 9, 10-14} A higher number of previous convictions for prostitution was found in female firesetters compared to a control group in a study by Tennent *et al.*¹ Other factors that have been reported are severe dysmenorrhea, earlier onset of sexual activity, and being a single female.^{1, 9, 10}

A number of different psychiatric illnesses have been described in female arsonists although Tennent *et al.*¹ observed no significant differences between female arsonists and a control group. An association with suicide and selfimmolation has been reported.^{1, 3, 9} In addition, the proportion of female arsonists suffering from psychosis is reported as being higher than males.^{3, 4, 9} Lewis and Yarnell³ reported a 68 percent incidence of mental retardation in their sample of female firesetters compared to 48 percent for males, although this appears to be high when contrasted to more recent studies.⁵ Another study determined a trend for depressive neurosis to be seen in female arsonists.⁵ Immaturity has also been suggested to be an influence in firesetting behavior.^{9, 12}

Methods

Fifteen consecutive females charged with arson and referred to the department of forensic psychiatry at the Royal Ottawa Hospital for pretrial examination were evaluated in detail. The sample group consisted predominantly of

inpatients admitted to either a medium or minimum security setting, although a small number of outpatients were included. The comparison group consisted of 77 males charged with arson and presenting in a similar manner to the department and during the same time period. The arsonists studied are representative of the total number of female persons charged with arson in the city of Ottawa between the years 1978 to 1984. Both groups underwent standard psychiatric and psychometric evaluations. Data collection was standardized through use of the Forensic Psychiatric Questionnaire¹⁵ and other standardized data collection procedures in operation in the research program. The data was coded for computer analysis using the SPSS/PC+ V2.0.¹⁶

Results

Sex, Age, and Education The sample group consisted of 15 females with a mean age of 26.5 years (*SD* 10.9) and with age range from 14 to 47 years. Four (26.7 percent) subjects were younger than 17 years of age. The comparison group consisted of 77 males with a mean age of 24.6 (*SD* 10.7). Among the female arson group four (26.7 percent) had a grade 7 education and less; four (26.7 percent) had a grade 8 education; two (13.3 percent) had completed grade 9; and 5 (33.3 percent) had achieved grade 10 or 11. The male arsonists had 18 (23.4 percent) with a grade 7 education or less; 13 (16.9 percent) with a grade 8 education; 15 (19.5 percent) with a grade 9; 18 (23.4 percent) with grade 10 or 11 education; 10 (13.0 percent) with a grade

12; and five (6.5 percent) with at least a college diploma certificate.

Psychosexual Aspects Seven (46.7 percent) females compared to 52 (68.4 percent) of the male arsonists were single. No female arsonist was currently married, but seven (46.7 percent) were separated or divorced and one (6.6 percent) was widowed. In contrast, seven (9.2 percent) of the males were married, seven (9.2 percent) were separated or divorced, and one (1.3 percent) was widowed. Nine (11.8 percent) were involved in a common-law relationship at the time of the evaluation. The mean age at the time of their first sexual experience was 16.5 years for 11 female arsonists. One subject reported being the victim of incest at the age of five. A history of sexual promiscuity was elicited in six female arsonists. One of the sample group presented with egodystonic homosexuality. No correlation between the time of commission of the offense and the late luteal phase of the menstrual cycle could be elicited.

Psychiatric Aspects Table 1 lists the psychiatric diagnoses of the female and male arson groups according to DSM-III-R.¹⁷

The intelligence level of the female arson group reached the upper limit of the borderline intellectual functioning category (mean IQ 71 to 84 DSM-III). The mean full scale IQ was 82.6 (*SD* 8.7). The male comparison group had a mean full scale IQ of 88.4 (*SD* 12.9). The difference between the two groups was not statistically significant. Eight (53.3 percent) female arsonists had had previous contacts with psychiatric serv-

Table 1
Psychiatric Diagnoses of the Female and Male Group

DSM-III-R Diagnoses*	Female Arsonists	Male Arsonists
	n (%)	n (%)
Adjustment disorder	1 (6.6)	5 (6.6)
Mood disorder		
Major depression	3 (20)	2 (2.6)
Anxiety disorder		
Post-traumatic stress disorder	1 (6.6)	0 (0)
Conduct disorder	3 (20)	10 (13.2)
Impulse Control disorder elsewhere classified		
Pyromania	1 (6.6)	2 (2.6)
Mental retardation		
Mild	1 (6.6)	0 (0)
Personality disorder	7 (58.3)	31 (40.8)
Sexual disorder		
Paraphilia	0 (0)	2 (2.6)
Schizophrenia	1 (6.6)	0 (0)
Psychoactive substance use disorder		
Alcohol abuse	7 (46.6)	33 (42.8)
Drug abuse	4 (26.6)	16 (22.0)

* When multiple diagnoses applied, these were listed accordingly.

ices for reasons unrelated to arson. Eight (53.3 percent) females had a past history of suicidal gestures or self-mutilation, whereas 17 (22.1 percent) males had such a history. In the female arson group, a direct relationship between arson and suicidal behavior was present in two cases, and the same relationship was found in three males. In addition, eight (53.3 percent) female arsonists had a history of alcohol abuse, and five (33.3 percent) had experimented with soft drugs (cannabis derivatives). In comparison, 35 (45.4 percent) male controls had a history of alcohol abuse, and 19 (24.7 percent) had a history of soft drugs use.

Legal Aspects

Classification of Arson A modification of Lewis and Yarnell's³ classification based on motivation was adopted. An extra group, namely "suicidal at-

tempt" was added. Data were available on 12 female arsonists. The results are shown in Table 2.

Other Characteristics of Arson It was also found that the majority of female arsonists set fire to their own place of residence. This was documented in 10 cases. One case involved the employer's house, and one adolescent set fire to a treatment home. Only three (20 percent) arson offenses were associated with the use of substances, mainly alcohol. This number reached 24 (31.2 percent) in the male arson group. At least six (40 percent) female arsonists were recidivists. Interestingly, a previous history of criminal charges for arson, fraud, or theft was present in all cases.

Discussion

Female arsonists have been much less extensively studied than their male

Table 2
Classification of Arson by Motives

	Female Arsonists	Male Arsonists
	n (%)	n (%)
Accidental	1 (6.6)	2 (2.6)
Psychotic (Delusional)	0 (0)	8 (10.4)
Revenge	4 (26.7)	21 (27.2)
Sexual gratification (Erotic)	0 (0)	3 (3.9)
Attention-seeking	3 (20)	19 (24.7)
Suicidal attempt	2 (13.3)	2 (2.6)
Professional (Compensation)	0 (0)	2 (2.6)
Children's	2 (13.3)	5 (6.5)
Unknown	3 (20)	15 (19.5)

counterparts. In fact, since the monograph of Lewis and Yarnell in 1951, only a minority of authors have reported on female arson.^{1, 3, 9} This is probably due to arson being considered to be primarily a male activity. The sample group reflects the total number of female arsonists referred for pretrial examinations to a university department of forensic psychiatry. It further represents 19.5 percent of the total number of arsonists. This ratio of female/male arsonists is consistent with figures found in contemporary publications.^{1, 3, 5-7}

The mean age of our sample group was 26.5 years. A number of cases occurred in late adolescence but in contrast to other reports,^{3, 4} the incidence was low for the middle-age period. This study confirms an even age distribution among female firesetters, which is similar to male arsonists.

The psychosexual background of the subjects was considered in more detail in view of previous reports. With a mixed sample of adolescent and adult arsonists, it was not surprising to find a high number of single individuals. Even

taking this into account the adult females had frequently experienced marital dissolution, and none had remained married at the time of the commission of the offense. In a similar manner, a degree of sexual promiscuity and first sexual experience at a relatively young age were elicited in a majority of subjects. These features were previously discussed by Tennent and his coworkers¹ in a controlled study of female arsonists. It is not clear how these factors relate to the firesetting activity itself. One explanation could be the presence of a general impulse control problem. Another possible explanation was first outlined by Dalton,¹⁸ who noted that nearly half of the women in a London prison had committed their index offense in the perimenstruum encompassing the four days prior to and four days after the onset of menses. Operational diagnostic criteria for late luteal phase dysphoric disorder (premenstrual syndrome) were further reviewed in a recent article.^{17, 19} Behavioral disturbances were searched for in those cases where the data were available, but no correlation was found.

Considering the psychopathology in the sample group, personality disorder appears to be an underlying factor in this type of behavior. Moreover, when one also considers the category of conduct disorder present in the younger subjects, it is reasonable to hypothesize a link between firesetting, personality disorder, and other forms of behavioral disturbances which are characterized by a lack of impulse control. As strict diagnostic criteria were used the diagnosis of personality disorder does not merely lie on subjective impressions. It is important to mention that the categories of personality disorder included both antisocial and histrionic types. All these women exhibited psychopathic features, although some did not meet the full criteria of antisocial personality disorder.

The DSM-III-R¹⁷ system of classification lists pyromania under the category of Impulse Control Disorders not elsewhere classified. Only one case among the sample group fulfilled all criteria for this diagnosis. Similarly only two male arsonists were diagnosed as having pyromania and have been reported elsewhere.²⁰ We found that the operational criteria should be interpreted with caution because a sense of tension or affective arousal before the act and subsequent relief may not include anger. The lack of subjects fulfilling the criteria for pyromania should not be seen as counter to the association between impulse control disorder and firesetting but rather as reflecting the strict operational criteria needed for the diagnosis.

Although only a few offenses were related with the use of alcohol, a history of alcohol abuse was highly prevalent among the sample. It was a secondary diagnosis in most cases. Other authors^{1-5, 9, 12-14} have commented on the relationship of alcohol abuse with firesetting, and this study confirms this. This study does not show a higher prevalence of psychoses or organic mental disorders among female arsonists, contrary to the findings of previous studies.^{3, 4, 9} Also in contrast to the literature,³ mental retardation was not a frequent finding, although a majority of subjects functioned in the borderline range of intelligence. Accurate measures of the intellectual functioning with standardized testing may account for the apparent discrepancy.

An association with suicidal gestures was also found in accordance with other studies.^{1, 3, 9} In two cases, the firesetting activity was the result of serious suicidal attempts which had failed. This was included in the classification of arson as it was felt that the other categories would not reflect this specific motive for arson. Revenge was the most frequent motive and this finding was consistent with the literature.^{1, 3, 9, 12} In this particular study, "attention seeking" behavior and "children's" firesetting were significant motives for arson. In addition, this study replicates the finding that female arsonists tend to set fires to their own property or place of residence. As suggested elsewhere, they tend to choose a target invested with emotional meaning, acting out of revenge and attention seeking behavior.^{3, 4, 9} Financial gains or insurance

compensation do not seem to be a motive in the firesetting activity.

The rate of recidivism was found to be relatively high. This is clearly in contrast to the findings of Lewis and Yarnell³ where the recidivism rate approximated 13 percent. Reasons for this discrepancy could include the small sample and different presenting characteristics or selection criteria. It is possible that the cases referred constitute a biased sample of individuals who raised more concerns among the legal authorities.

In conclusion, this study demonstrates a high prevalence of various behavioral disturbances among the subjects. Firesetting is not an isolated abnormal behavior and appears to be linked with other manifestations of deficient impulse control. In a majority of cases, diagnoses of personality disorder or conduct disorder were reported. These were also associated with the recidivism of the firesetting activity. The identification or recognition of psychopathic traits is also particularly important. Arson represents a serious crime which results in major property losses and death, and society as a whole has to assume this burden. It follows therefore that the prevention of recidivism is essential. The forensic psychiatrist is often requested to examine arsonists and report his findings to the criminal justice system. The medico-legal implications are clear in this context and are potentially enormous as personality disorder and impulse control disorders are notoriously difficult to treat. Psychiatrists must be acutely cognizant of this and ensure these limitations are conveyed to

the court. It is possible that some promising cognitive behavioral treatments used in the psychosexual disorders could assist in curbing firesetting behavior, but systematic studies are lacking at this time.

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