

## A Study of Firesetters in the South-West of Ireland

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A survey of 54 firesetters who had been in hospital or prison was conducted. The results confirmed earlier findings on several aspects, such as male predominance, unstable childhood and proclivity to self-injurious behaviour. Revenge emerged as the commonest motive overall and an association with alcohol was found. Only 11% of the fire-raising episodes, whether among hospital or prison groups, were truly trivial. Arsonists in prison and hospital had many features in common and generally were quite psychologically disturbed, which contrasted with those who set fires for profit. A poor outcome was found, with continuing self-harm and a high suicide rate. Our findings suggest that arson recidivism arises in at least 35% of arsonists.

The concept of fire has always attracted attention. Originally it was the gift stolen by Prometheus from the gods. Literature and our everyday language abound in references to fire. Metaphorically, it has connotations of power and passion and we are all aware of the fascination which fire holds for children. Sam Shepard (1985), writing on arson, describes setting a wooded area alight and portrays the subsequent sensuous gratification evoked by watching "the beautiful orange glow eat up the blackness" and smelling "the blue smoke cut through the mountain air".

It is not surprising that firesetting attracted the attention of early psychoanalysts. They regarded it as a regressive phenomenon related to urethral eroticism, with a sadistic element (Freud, 1932). The supposed association with childhood enuresis played a large part in the formation of this hypothesis. Objective evaluation of firesetters has arisen in more recent years, beginning with the comprehensive study of Lewis & Yarnell (1951). Some general features of firerisers have emerged, including a male predominance, with poor social adjustment and psychosexual problems which could be related to an unstable early environment. However, despite the ubiquity and antiquity of the problem, there is a general sparsity of information, particularly in relation to the long-term outcome of these individuals.

The need for further research on firesetters is highlighted by the fact that it is now believed that in the United States at least 50% of all fires not labelled as arson are started intentionally (Blumberg, 1981).

Self-immolation by fire is reported to be uncommon. Occasionally it is used as a means of dramatisation of political protest. More often it

arises in females with severe psychopathology such as a psychotic or depressive illness (Scott, 1978).

### Method

Firesetting, for the purpose of this study, was defined as the deliberate setting alight of any property, including one's own clothing, which might or might not endanger life. Several methods were used to identify the sample of firesetters studied. A list of patients who were previously known to have set fire wantonly was collected by personally contacting all the senior medical and nursing staff at the two major long-stay psychiatric hospitals and four acute adult psychiatric units within the Southern Health Board of Ireland. All those approached cooperated, but needless to say some remembered more firesetters than others and the same arsonists were mentioned by several different personnel. We believe that the bias of such a sampling procedure favoured those in the middle range of dangerousness, as the trivial would have been forgotten by the respondents and the extremely dangerous would have been committed either to prison or to the Central Mental Hospital, which is the equivalent of Broadmoor.

This method yielded 37 firesetters. Seven of these were self-immolators, all of whom had carried out their self-immolation while on a hospital ward. Of the remaining 30 arsonists, eight (26.6%) carried out the firesetting act while in hospital, and for 17 (77%) of the remaining 22, admission to a psychiatric hospital was directly related to their fire-raising. As it was not possible to interview personally all of these firesetters, for a variety of reasons (no longer in contact with the psychiatric services or through death), it was decided that the case-notes should be examined in detail. Information was collected about each individual, which included his adult social environment, the circumstances of his upbringing and the recorded type of psychopathology (based on ICD-9) present at the time of the burning. A particular effort was made to clarify the circumstances of the firesetting, including any association with alcohol or drugs, whether done alone or with an

TABLE I  
Age and geographical origin

	Prisoners (n = 17)		Hospital group				Total (n = 54)	
	Number	(%)	Self-immolators (n = 7)		Other hospital patients (n = 30)		Number	(%)
			Number	(%)	Number	(%)	Number	(%)
Average age: years	[23.9 <sup>1</sup> ]		[31.5]		[37]		—	
Age group:								
15–25	11	(65)	2	(29)	8	(27)	21	(29)
26–35	4	(24)	4	(57)	7	(23)	15	(28)
36–45	1	(6)	—		10	(33)	11	(20)
46+	1	(6)	1	(14)	5	(17)	7	(13)
Urban	7	(41)	6	(86)	18	(60)	31	(58)
Rural	10	(59)	1	(14)	12	(40)	23	(44)

1. Excluding 65-year-old schizophrenic

accomplice, what the likely motivation was and what were the likely consequences. If information was lacking in any of these areas, it was sought from the medical and nursing staff who had dealt with the individual.

Seventeen prisoners were examined individually for the study at Cork Jail, which serves the counties of Cork, Kerry, Waterford and Tipperary. The authors are confident that these were all the fireraisers who served time in Cork Jail during 1985, either as remand or convicted prisoners. Each admitted the burning to the examining doctor (MJK). A detailed semi-structured clinical interview was used, covering the same areas as for the hospital sample.

An effort was made to obtain a third sample comprising those who criminally burn for personal gain. These are people who set fire to their own property with a view to benefiting from the insurance or from a malicious damages claim. For the purposes of constructing such a sample, after several preliminary meetings, a two-hour discussion was arranged with three loss adjusters, who prefer to remain anonymous (a loss adjuster is a professional person employed by an insurance company to put a value on the extent of damage to property and if possible to ascertain the cause).

It was not possible to collect information from the loss adjusters on individual cases of possible non-accidental burning (because of their fears of breaching confidentiality) which could be compared in a quantitative way with the prison and hospital samples. From their point of view, non-accidental burning falls into two groups. The larger is where the property is maliciously burnt by people other than the owner. (Several of the prison population in the present study were known professionally to the loss adjusters.) The smaller group is where the property is burnt by the owners themselves.

## Results

The prisoners were younger than the hospital patients and more likely to be of rural origin (Table I). The difference in mean ages between the two samples is statistically significant (*t*-test,  $P < 0.01$ ). One prisoner, aged 65 years,

was suffering from schizophrenia and is excluded from the average age quoted for the prisoners. The difference in urban/rural origin fails to reach statistical significance.

All the prisoners were male by virtue of the sampling procedure. Within the hospital group, 86% of the self-immolators were female, but the situation was reversed for the other hospital patients, 77% being male. The prison and hospital samples did not differ in other demographic characteristics. Both showed a preponderance of single marital status (70%), lower social class (70%) and a high degree of unemployment (78%).

On examination of the childhoods of these individuals it was found that five (10%) had been reared in orphanages or some place other than the parental home. Of the 49 who were reared at home, there was mental illness or psychopathy present in the parents of 37%. Altogether an unstable early environment can be inferred for a total of 46%.

The diagnoses of psychosis and personality disorder were commonest, constituting two-thirds of the sample (Table II). For those ascribed a diagnosis of personality disorder, there was independent evidence in the history to support the diagnosis other than the act of arson itself. The paucity of those ascribed a diagnosis of depression is surprising, particularly for the self-immolators, 71% of whom were psychotic.

On examination of the tendency to engage in self-injurious behaviour, firesetters emerge as a disturbed group of individuals. A history of prior self-mutilation was present in 9 (53%) prisoners and 12 (32%) patients. Prior parasuicide had arisen in 5 (29%) prisoners and 24 (65%) patients. If cognisance is taken of the tendency to self-harm, it can be inferred that the prison sample is quite psychologically disturbed. Eight (47%) prisoners had previously been in a psychiatric hospital and four (13%) of the hospital group had previously been in prison. Overall there is considerable overlap between the hospital and prison groups. However, the prisoners were more likely to have engaged in other antisocial activities: 11 (64.7%) prisoners had a history of antisocial activities compared with 10 (27%) of the hospital group, the difference between the two groups being statistically significant ( $\chi^2 = 3.84$ ; d.f. = 1;  $P < 0.05$ ). When

TABLE II  
Diagnoses ascribed at any time

Diagnoses	Prisoners		Hospital group				Total	
	(n = 17)		Self-immolators (n = 7)		Other hospital patients (n = 30)		(n = 54)	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Psychosis	3	(18)	5	(72)	13	(43)	21	(39)
Depression	—		—		4	(13)	4	(7)
Mental handicap	3	(18)	—		1	(3)	4	(7)
Personality disorder only	4	(24)	2	(28)	10	(33)	16	(30)
Alcohol dependence only	2	(12)	—		2	(7)	4	(7)
No psychiatric illness	5	(29)	—		—		5	(9)

the relationship between diagnosis and symptoms was examined, those ascribed the diagnosis of personality disorder emerged as the most severely disturbed, many having engaged in prior self-harm and antisocial behaviour.

Regarding the fireraising act itself, an accomplice was present in only three cases (9%). It transpired that nine of the prisoners and ten patients had taken substantial quantities of alcohol at the time, and alcohol may have played a causative role in the act, as it appears that underlying aggressive instincts were unveiled which might otherwise have remained dormant. Only two subjects were under the influence of drugs and both of these were prisoners.

Revenge was the commonest motive in both populations (Table III). As expected, firesetting instigated by suicidal and delusional motives was more prevalent within the hospital sample, but delusional motivation was also represented in the prison sample. The motive was recorded as delusional if the fireraising arose secondary to a false belief which had developed during a psychotic illness; for example, one man set fire to cars under the delusion that the firesetting would avenge the suffering of deprived children of the world.

Where an individual attempted to influence others or enforce change to secure personal favours by the act, the motive was listed as manipulative; for example, one prisoner set fire to his cell in an effort to precipitate his transfer to another prison. The category 'motiveless' was used for those

who, despite their admission of guilt, could not provide any reason for carrying out the act.

Regarding the relationship between diagnosis and motivation, revenge was the primary motive for about half of all diagnostic groups, except for the psychotic, of whom only two of the 21 cited revenge as their motive. Almost half of the latter were motivated by delusions and eight by suicidal attempts. Alcohol was present in 50% of those motivated by revenge, compared with 35% for the total, but the difference does not reach statistical significance. The targets of the revenge were diverse and included relatives, neighbours and figures of authority. Those motivated by tension-reduction tended to engage in other tension-reducing activities such as self-mutilation and parasuicide. Four of the five so motivated were recurrent firesetters.

Regarding the potential consequences of the fireraising activities, in only 11% of the cases, whether among the prison or hospital group, were they truly trivial. The prisoners' fireraising was more likely to result in serious damage to property, while only the hospital group endangered themselves or others. Generally, the prisoners were more likely to externalise their aggression, while the patients tended to direct it inwardly. This difference was statistically significant ( $\chi^2 = 5.02$ ; d.f. = 1;  $P < 0.025$ ).

The average time interval between the firesetting episodes and the study was 5.65 years for the hospital group. At the time of the study, of the 30 hospital arsonists, 15 (50%)

TABLE III  
Motivation

Motives	Prisoners		Hospital group				Total	
	(n = 17)		Self-immolators (n = 7)		Other hospital patients (n = 30)		(n = 54)	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Revenge	8	(47)	—		12	(40)	20	(37)
Manipulative	2	(12)	—		—		2	(4)
Tension reduction	2	(12)	—		3	(10)	5	(9)
Sexual gratification	—		—		—		—	
Delusional	2	(12)	2	(29)	5	(17)	9	(17)
Suicidal	—		5	(71)	7	(23)	12	(22)
Gain	—		—		—		—	
Motiveless	3	(18)	—		3	(10)	6	(11)

were living in the community, 12 (40%) were in long term care; 1 (3%) was in prison; 1 (3%) had died of natural causes and 2 (7%) had died by suicide. This latter finding contrasts with a suicide rate of 13/100 000 (0.013%) described by Clarke-Finnegan & Fahy (1983) in a population-based study in the West of Ireland. Overall, a poor prognosis with a high suicide rate is the picture which emerges for hospital arsonists.

At the time of the study, from the entire sample, 19 (35%) had been involved in one or more episodes of further firesetting. Of these, seven had a recurrence within the first six months of the original act, and six were recurrent firesetters (i.e. engaged in repeated episodes). The remaining six had a recurrence after periods of between six months and ten years, indicating that arson recidivism can arise even after a lapse of many years.

Of the six recurrent firesetters, all were male, of lower social class, and effectively single, and had unstable childhoods. All had a psychiatric diagnosis: four were personality disordered, one was mentally handicapped and one schizophrenic. All had shown some form of behaviour disturbance: four had engaged in self-mutilation, three had attempted suicide and five had committed antisocial acts. One of them eventually committed suicide.

Material gain did not feature as a motive in this study, but it merits consideration, as the loss adjusters estimate that in Ireland, of the claims against insurance companies for property loss due to fire, there is suspicion that the fire is engineered by the owner in 5% of the cases and there is convincing evidence in about 1%. Typically, those motivated by material gain burn their own property, which is usually overinsured in a pre-planned calculated way, often employing accelerators (e.g. petrol). They are of average or above-average intelligence and mentally normal, and generally come from stable families with assets. Their personalities are resourceful, they have the ability to generate property, and they subsequently deny committing the act. This contrasts with hospital and prison arsonists, whose firesetting arises impulsively against a background of mental instability, personality problems, limited intelligence and deprived childhoods.

### Discussion

Literature of the nineteenth century indicated that arson was usually a crime committed by females. Currently it is generally accepted that males predominate and comprise approximately 85% of all arsonists (Lewis & Yarnell, 1951). However, others have suggested that the supposed rarity of female arsonists could be apparent rather than real, due to the tendency to avoid prosecuting them for the crime (Tennent *et al.*, 1971). Our results show a preponderance of males among the arsonists. However, among those who used fire for the purpose of self-immolation, there was a reversal of the male-to-female ratio. These appear to be a distinct subgroup, with severe psychopathology in the form of a psychotic illness being present in the majority.

With regard to the other demographics, our results are consistent with earlier studies along several aspects such as a large age range, low social status, high unemployment rate and a paucity of long-term psychosexual relationships. The age distribution was much less scattered for the prison sample, leading to a lower mean age, which is not unexpected, as in general the prison population is comprised of young males. In fact, our results indicate that age may be a factor which biases society's methods of dealing with firesetters. Considering the sparsity of psychosexual relationships, it is likely that the failure of these individuals to achieve or sustain relationships is part of a general inadequacy, which Inciardi (1970) has tersely described by comparing these individuals to hoboes because of the lack of emotional and social ties, together with their susceptibility to problem drinking.

Almost half the individuals in this study may have been rendered vulnerable to psychological disturbance through parental absence or parental mental illness or psychopathy during their childhoods. An unstable early environment has frequently been found among arsonists (Lewis & Yarnell, 1951; Tennent *et al.*, 1971; Yesevage *et al.*, 1983). Macht & Mack (1968), reporting on four adolescents, hypothesised that their firesetting represented an attempt to re-establish links with their fathers, from whom they had been separated. However, it is more likely that traumatic emotional experiences during childhood and adolescence predispose people to psychological disturbance, of which firesetting may be one manifestation.

No single diagnosis has been found to characterise firesetters. Likewise, our results showed diagnostic heterogeneity. The rather large figure of 38.8% who were psychotic is obviously a reflection of the selection procedure, as in general it is held that psychotics comprise only 10–15% of all firesetters (Blumberg, 1981). Various figures have been cited for the proportion of mentally ill firesetters who are mentally handicapped (Yesevage *et al.*, 1983). Although only 7.4% of our cases were actually mentally handicapped, many more were functioning in the dull normal and low average intelligence ranges. Levin (1976) suggested that arsonists frequently have psychopathic personalities. Almost a third of the individuals in this study had personality disorder as a primary diagnosis, many more having it as a secondary diagnosis.

Despite the diagnostic variability, a consistent finding was the proclivity of individuals of all diagnostic types to engage in self-destructive behaviour. McKerracher & Dacre (1966), in a study of arsonists in a special security hospital, found symptoms of



self-mutilation and attempted suicide in 13% and 23% respectively. It appears that, for some, fire-setting is an activity resorted to at times of despair or tension, and in this respect it is akin to self-mutilation and parasuicide.

Simpson (1975) noted that self-mutilators often have difficulty expressing their needs and emotions and generally have poor verbalising abilities. Geller & Bertsch (1985) observed the tendency of firesetters to engage in non-lethal self-injurious behaviour, and hypothesised that firesetting might be used as a communicative vehicle by those with poor verbalising skills. Mentally handicapped individuals may also use it for this purpose, and this is substantiated by the preponderance of these individuals in the motiveless category.

Ascertainment of the underlying motivation is important as it may be valuable in prevention. Revenge has been found to be the commonest motive among arsonists of all diagnostic types. Virkkunen (1974) estimated that 50% of schizophrenics were motivated by hate, often directed against society in general, and he concluded that their motives were understandable on normal psychological terms. However, in our study the motives of the psychotic were more likely to be related to their illness rather than being rational, and this is reminiscent of the findings of Taylor (1985), that 80% of the offences of the psychotic were either directly or indirectly attributable to their illness. Our results highlight the disinhibiting effect of alcohol, particularly for those whose firesetting was motivated by revenge.

Among the recurrent firesetters, the motive of tension-reduction was commonest, and two of these had some of the features of pyromania as outlined in DSM-III. These include recurrent failure to resist impulses to set fires, mounting tension prior to setting the fire and subsequent release, lack of other motivation such as material gain, and the absence of another disorder. True pyromania fulfilling all these criteria is now considered rare, even though Lewis & Yarnell (1951) estimated that up to 40% of male arsonists were pyromaniacs.

It has been suggested that fire has sexual symbolic meaning for some arsonists and therefore firesetting may be a means of obtaining sexual gratification. However, this did not emerge as a motive in this study, even among the recurrent firesetters, for whom firesetting is supposed to be a means of obtaining sexual gratification. This suggests that previous literature has placed far too much emphasis on the importance of sexual gratification as a motive among firesetters.

In contrast to the degree of psychopathology displayed by many arsonists, those motivated by

material gain are generally psychologically 'normal', and their arson represents a calculated, rational act. It follows that prevention of this type of arson can only be achieved by elimination of the financial gain involved.

The poor outcome is a reflection of the general inadequacy and the degree of psychological disturbance of these individuals. Our results suggest that self-destructive behaviour tends to continue and may eventually culminate in suicide. The suicide rate of 66 per 1000 for the hospital sample (excluding the self-immolators) is markedly elevated compared with a suicide rate of 1 per 1000 psychiatric admissions found by Farberow *et al* (1971) and a rate of 1.3–2.5 per 1000 in six psychiatric hospitals (Gale *et al*, 1980). An inability to deal with aggressive instincts can be inferred, aggression sometimes being directed inwards and at other times outwards.

Bradford (1982) has suggested a linkage between homicide, suicide, and arson. Certainly the results of this study would espouse an association between suicide and arson. Furthermore, the firesetting of three individuals contained elements of danger to the lives of others, one of which represented a serious homicidal attempt. Further studies are needed to explore this possible linkage, but our results lend support to it.

Lewis & Yarnell (1951) found recurrence of arson in 30% over a 15-year period. In another study, arson recidivism was reported to be rare: in a 20-year cohort study of 67 arsonists, only three were reconvicted for arson (Soothill & Pope, 1973). However, the low rate of arson recidivism among these individuals might be apparent rather than real, due to failure of detection of further arson by the law-enforcing authorities. Among the 35% who were recidivists in our study, the fact that recurrence was most likely within the first six months implies that adequate assessment, management, and follow-up for at least six months may be potential means of prevention of arson recidivism.

Overall, the prisoners appear to be a more dangerous group, when the consequences of their fireraising and history of prior antisocial activities are considered. However, there is considerable overlap between the two populations, many prisoners showing evidence of psychological disturbance and a third of the hospital sample having a history of antisocial activity. Society's method of dealing with these appears to be haphazard and arbitrary, with irrelevant variables such as age and origin playing determinant roles in the disposal of these individuals. It is generally recognised that there is a high prevalence of psychiatric disorder among prisoners. In a recent survey of those on remand in Brixton,

Prison, Taylor & Gunn (1984) found major symptoms of psychiatric illness in 9% and withdrawal symptoms in a further 8.6%. Interestingly, they found that 65% of arsonists were psychiatrically disturbed. Our study demonstrates the overlap between the mental health and the criminal justice systems and also highlights the arbitrariness of society's method of dealing with these individuals.

Overview of the results of this study leads us to make certain recommendations regarding the assessment and management of firesetters. Even though no reliable prediction can be made on the diagnosis of a mentally ill firesetter, he is likely to be of below average intelligence and to display a general inadequacy in many aspects of his life. Other areas might also be usefully explored, including the ability to communicate and express emotions, the methods of dealing with tension and frustration, and the presence of problem drinking and any unveiling of aggressive instincts under its influence. Ascertainment of the underlying motivation, even though it may be difficult and elusive, should be attempted as far as possible.

Whatever setting these individuals are assigned to, there should be adequate provision of medical care and rehabilitation. Bowden (1978) has shown that nearly two-thirds of mentally abnormal criminals who get the chance of treatment show some improvement. It is likely that many have been subjected to much deprivation, beginning in their childhoods and perhaps continuing thereafter, predisposing them to a general inadequacy in many aspects of their lives. Further education of those with poor communicative skills and low intelligence scores would be beneficial.

In view of the large number who offend as a direct or indirect consequences of their illness, it is important that adequate treatment is provided, followed by suitable rehabilitation programmes. Regular follow-up examinations for at least six months, with admission at times of stress and tension, is advisable and is also likely to be a valuable preventative measure.

In conclusion, firesetting is a highly complex behaviour: it is not simply a manifestation of a basic sociopathic inclination but for many is indicative of severe underlying psychopathology. Firesetting appears to have many different meanings and determinants for various individuals, and one hypothesis alone is unlikely to explain why some resort to it. However, it is clear that many of these individuals suffer much inner disharmony, and attempts should be made to alleviate this where possible. The importance of adequate assessment and management is borne out by the potentially serious

consequences of many incendiary acts and also by the high rates of arson recidivism.

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