

## Assessing and Treating Adult Firesetting

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FirePsych, Inc.

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## Definitions, Terms, and Labels

**Arson** - exclusively a legal term for a crime defined by statute. Intentional, willful, or "malicious" destruction of property. Requires charge to conviction.

**Firesetting** - any act of deliberately setting a fire, typically what clinicians encounter. A wide umbrella that captures varied motivations, undocumented incidents.

**Pyromania** - A DSM-V diagnosis

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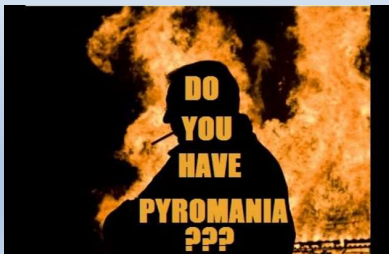
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## Pyromania: History and Utility of a Diagnosis



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## "Pyromania of Marc"



- 1838
- Paris, France
- "Monomanie incendiaire"
- Isaac Ray, 1856
- James Garfield, 1882
- Sigmund Freud, 1932

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### ***Acquisition of Power Over Fire*** Sigmund Freud, 1932

"Now I conjectured that in order to possess himself of fire it was necessary for man to renounce his homosexually tinged desire to extinguish it with a stream of urine.

I think that this conjecture can be confirmed by the interpretation of the Greek myth of Prometheus, provided we bear in mind the distortions to be expected in the transition from fact to the content of a myth."

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### ***Fire...Is it Arson?*** AETNA Surety and Casualty Company Barracato, 1979

Included within the collection of materials used for fire service promotional exams for Connecticut fire service personnel, it was suggested to fire investigators that arson suspects be escorted to the bathroom because:

***"urination is a psychological form of sexual gratification for the pyromaniac, and it is impossible for him to function in front of others."***

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Disruptive, Impulse –Control, and Conduct Disorders DSM-V

### Pyromania 312.33 (F63.1)

- A. Deliberate and purposeful fire setting on more than one occasion.
- B. Tension or affective arousal before the act.
- C. Fascination with, interest in, curiosity about, or attraction to fire and it's situational context (e.g., paraphernalia, uses, consequences).
- D. Pleasure, gratification, or relief when setting fires, or when witnessing, or participating in their aftermath.
- E. The fire setting is not done for monetary gain, as an expression of sociopolitical ideology, to conceal criminal activity, to express anger or vengeance, to improve one's living circumstances, in response to delusions or hallucinations, or as a result of impaired judgement (e.g., in dementia, Mental Retardation, Substance Intoxication).
- F. The fire setting is not better accounted for by Conduct Disorder, a Manic Episode, or Antisocial Personality Disorder

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Pyromania remains a source of controversy in terms of its applicability and utility as a diagnosis and the frequency of its assignment among studied population remains quite rare (Doley, R., 2003; Doley, et al, 2015; Sambrooks, et al., 2021).

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### Incidence and Prevalence Data

Arson arrest rates (10%) represent a gross underestimation (Willis, 2004).

Arson estimates vary widely depending on agencies.

22-37 per 100,000  
(FBI, 2018)

NFPA "firesetting" estimates:

83 per 100,000  
UK 122 per 100,000  
(Campbell, 2017; Home Office, 2021)



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## Prevalence: Firesetting in Psychiatric Settings

- 10-54% in adults admitted to medium security forensic settings have a recorded history of deliberate firesetting (Coid, et al., 2001)
- 17-26% in general psychiatric settings (Hollin, et al; 2013)
- 10% have prior conviction or criminal charge for arson (Goethals, et al., 2010)
- Females overrepresented
- Presumption that standardized treatments apply ("Treatment as Usual")

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## Repeat Firesetting Risk

- Estimations vary wildly, 4%-60% (Ducat, et al., 2015; Sambrooks, et al., 2021)
- No standardized tool or re-offense criteria available
- More likely to commit another non-fire offense (Sambrooks, et al., 2021)
- Firesetting severity (size, damage, injuries, fatalities) NOT associated.



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## Who Sets Fires?

- Generally males: 6:1
- Generally low SES
- Impoverished backgrounds
- Often antisocial
- Significant mental health and/or substance abuse histories



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## Diagnostic Qualities

Higher rates of schizophrenia, alcohol abuse, and less violent thought and behavior appear to distinguish arsonists from other offender groups (Fritzon, et al., 2021)

In a recent study 66% of firesetting subjects had a substance abuse disorder while another 33% were diagnosed with personality disorder (Nanayakkara, et al., 2021; Sambrooks, et al; 2021).

Significantly higher rates of schizophrenia and other psychotic disorders (70%) among firesetting populations as compared to other offender or patient groups along with lower levels of personality disorder diagnosis (Anwar, et al., 2011; Ducat et al., 2013b; Dalhuisen et al., 2015; Nanayakkara, et al., 2021).

Higher rates of fire interest and poor fire safety awareness, and identification with fire among firesetting offenders when compared to other offender groups (Gannon, O'Ciardha, et al., 2013; Gannon, Oliver, et al., 2019; O'Ciardha et al., 2015)

13

## Single Factor Firesetting Theories

### Psychoanalytic Theory (Freud, 1932)

Firesetting= symbolizes repressed sexual urges

### Social Learning Theory (Kolko & Kazdin, 1986)

Firesetting = manifestation of reinforcement contingencies, learning through modelling/imitation, originate from families who fireset

### Communication (Geller, 1992)

Firesetting = an attempt to communicate feelings

14

## Multifactor Firesetting Theories:

### Functional Analysis Theory (Jackson et al., 1987)

### Dynamic Behavior Theory (Fineman, 1995)

### Multi-Trajectory Theory of Adult Firesetting

(M-TTAF; Gannon, O'Ciardha, Doley, & Alleyne, 2012)

15

## Multi-Trajectory Theory of Adult Firesetting (M-TTAF)

(Gannon, O'Ciardha, Doley, and Alleyne, 2012)

Theory Knitting:

1. Risk-Need Responsivity Model
2. Good Lives Model
3. Firesetting Theory



Doley et al., 2015

16

## Multi-Trajectory Theory of Adult Firesetting (M-TTAF)

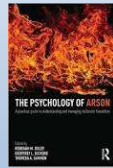
(Gannon, O'Ciardha, Doley, and Alleyne, 2012)

**Accounts for:**

- ✓ Firesetting in context of mental illness
- ✓ Firesetting and other antisocial behaviors
- ✓ Firesetting across all populations
- ✓ Distant and proximal risk factors
- ✓ Males and females
- ✓ Subtypes and trajectories
- ✓ Some supporting empirical evidence

**Identifies Treatment Needs:**

- ✓ Fire Interest/Fascination
- ✓ Emotional Self-Management Issues
- ✓ Offense Supported Thinking
- ✓ Communication/Relationships



Doley et al., 2015

17

## M-TTAF Structure

**Tier 1**

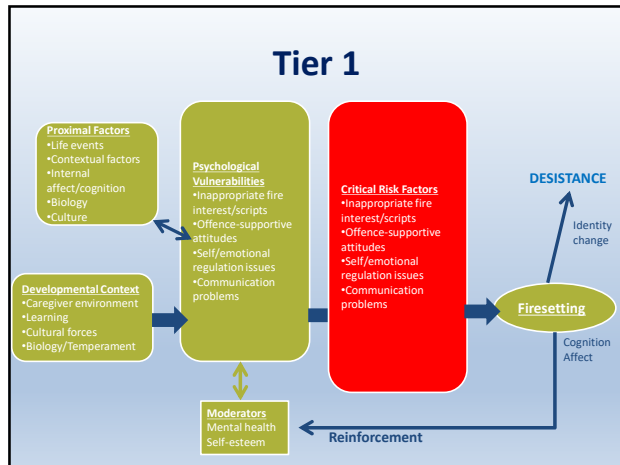
Broad framework of factors and mechanisms that interact to facilitate and reinforce firesetting.

**Tier 2**

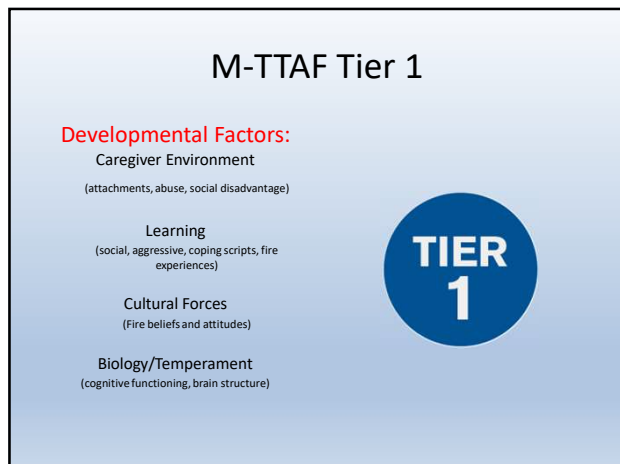
Summary of prototypical trajectories leading to firesetting.



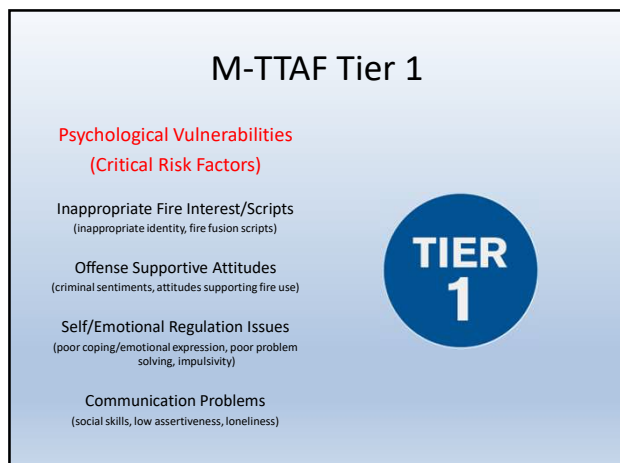
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## M-TTAF Tier 1

### Proximal Factors and Triggers

Life Events  
Contextual Factors  
Internal Affect/Cognition  
Biology  
Culture



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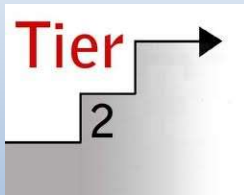
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## M-TTAF Tier 2

### Trajectories



Antisocial Cognition  
Grievance  
Fire Interest  
Emotionally Expressive  
Need for Recognition  
Multi-Faceted

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## Antisocial Cognition

- Primary risk factors: general criminality and antisocial values
- Not a particular focus on fire.
- Typically display early asocial onset, a prior diagnosis of CD or APD.
- Numerous antisocial peers and engage in a variety of criminal behaviors.
- Fire is a convenient means to a criminal end.
- Rarely marked by any interest or fascination in fire.
- Few fire specific offenses.
- Problem with self-regulation such as poor impulse control and poor problem solving.



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## Grievance



- Primary risk factors: trait aggression, hostility, anger and self-regulation difficulties.
- Also can include communication problems.
- Fire-aggression fusion. Fire is a powerful message for revenge or retribution.
- Results in a reinforcing, short term increase in self esteem and self efficacy.
- Rarely fascinated by fire, it's a tool
- Asocial belief validates their use of fire.

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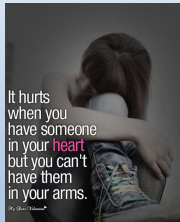
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## Emotionally Expressive



- Primary risk factors: communication (social skills, assertiveness and intimacy) and self-regulation (poor problem solving, impulsivity) difficulties.
- Proximal stressors overwhelm their coping skills (powerless, unheard, depressed, and hopeless)
- Setting a fire sends a dramatic message to others, a "cry for help"
- Fire as means to self harm or suicide.
- Commonly seen in both females and those diagnosed with BPD
- Firesetting can be used as both a means to communicate or to release intense negative affect.

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## Need for Recognition



- Primary risk factor: Communication
- Use fire in a pre-planned manner, a dramatic message to others, while remaining undetected.
- Gain is in the social recognition for having discovered and extinguished the fire or having saved others from danger (hero).
- They may display narcissistic features that fuel a powerful drive for recognition.

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## Fire Interest

- Primary risk factor: Inappropriate and excess fire interest or firesetting scripts.
- Developed a powerful fire-coping fusion script, fire when stressed as a means to cope by reducing arousal or self-soothing.
- Can also view fire as exhilarating and pleasurable and burn solely for that purpose.
- Likely hold fire-supportive beliefs ("It's not harmful", "I can control it")
- Unlikely to have a marked history of generic offending.



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## Multi-Faceted

- Primary risk factors: fire interest and offending supportive attitudes.
- Often have experienced a highly adverse and abusive developmental context, complex and serious problems across a diversity of factors associated with firesetting that coincide with a natural curiosity about fire
- Reinforced as a sensation seeking tool, a coping mechanism, or a means to convey a message.
- Crimes, including firesetting, are repetitive and with little regard for the safety of others.
- Deficits in a number of functional areas including self regulation, problem solving, impulsivity, communication, and anger.



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## Psychotic Firesetting

(Dailhusien, Koenraadt, & Liem, 2015)

- ❖ Psychotic firesetters were older, more often single, and unemployed
- ❖ Arson was more often the only crime, more mandatory hospitalizations, deemed less criminally responsible, more often referred for treatment
- ❖ Similar high impulsivity, low suicidal ideation, and expressive firesetting targeting objects
- ❖ More often set fire to their own property, exclusively acted alone, less frequently intoxicated.

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### Assessment of Adult Firesetting: Building Assessment Models



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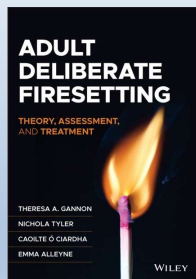
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### Adult Firesetting Assessment (Gannon, et al., 2022)



- Most current knowledge is "evidence informed". Sufficient to steer clinicians to make informed judgements.
- Encouraged to embed measures of characteristics linked to firesetting in assessment.
- M-TTAF provides resources necessary to inform assessment practice.

32

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### Constructing Firesetting Assessment Models

#### Factors:

- 1) Population Served
- 2) Service Model
- 3) Evaluation Purpose/Questions
- 4) Existing Evaluation Practices
- 5) Firesetting Specific Practice
- 6) Report Format-Articulation of Risk Indicators?



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## Firesetting Assessment Components

- ❖ Record Review
- ❖ **Fire Scene Evidence**
- ❖ Clinical Interviews
- ❖ Collateral Interviews
- ❖ **Psychological Testing**
- ❖ **Structured Firesetting Interview Tools**
- ❖ **Firesetting Behavior History**



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## Four Factor Fire Scales

(O'Ciardha, Tyler, & Gannon, 2015)

N= 565 (378 firesetting, 187 controls)

Males and Females

Prisons, mental health settings

Young offender group

FS group higher mean scores across all four factors and total score ( $p \leq .001$ )



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## Four Factor Tools

### Fire Attitude Scale (FAS)

(Muckley, A., 1997)

The Fire Attitude Scale (FAS) is a 20-item structured interview form that gathers a respondent's level of agreement with a number of prosocial and asocial statements about fire and firesetting. Respondents are asked to provide an answer ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

### Fire Interest Rating Scale (FIRS)

(Murphy & Clare, 1996)

The Fire Interest Rating Scale-Revised, is a 20-item questionnaire that uses a seven point Likert response scale with which clients are asked to describe "How they would feel" in response to various fire related situations. Responses include 1= Very Upsetting; 2= No feeling at all; 7=Very exciting.).

### Identification with Fire Questionnaire (IFQ)

(Gannon, O'Ciardha, & Barnoux, 2011)

The Identification with Fire Questionnaire (IFQ) is a 18-item self-report measure of identification and affinity with fire (e.g., 'fire is almost part of my personality') rated on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

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## Four Factor Fire Scale

(O'Ciardha, Tyler, & Gannon, 2015)

# 4

Combines items from the FAS, FQ, and FIRS

Identifies four themes related to firesetting:

*identification with fire*  
*serious fire interest*  
*fire safety awareness*  
*normalization of firesetting.*

Key cutoff scores help to identify key areas for treatment focus.

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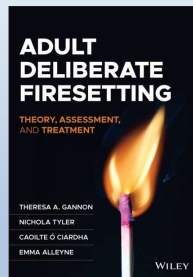
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## Firesetting Questionnaire

Gannon, et al (2022); Gannon, Olver, et al., (in preparation)

- ☐ Factor analysis of 171 questions from multiple sources.
- ☐ N=1402 (137 firesetting)
- ☐ Generated a 91-item scale, 8 factors
- ☐ Exceptional internal consistency
- ☐ FQ Subscales:
  - Firesetting as normal
  - Identification with fire
  - Fire interest
  - Fire safety
  - Pathological fire interest
  - Coping using fire
  - Fire is a powerful messenger
  - Fascination with fire paraphernalia



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## Firesetting Treatment Landscape

- No standardized treatment available (either in prisons or hospitals)
- Some individual, one time treatment programs in psychiatric settings
- Very little treatment evaluation/outcome data is published



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## Firesetting Treatment Landscape

- Availability of specialist is limited
- Primarily addressed via interventions aimed at “offending” behavior generally or one particular issue associated with individuals firesetting
- Most treatment reports are single case studies



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## Generalist Interventions

- Covert sensitization
- Aversive conditioning
- Social skills group
- Art therapy
- Pharmacological
- DBT adaptations

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## Specialist Interventions

Northgate Firesetting Treatment Programme (Taylor, et al., 2002)

Cognitive analytic oriented (Annersely, 2017)

ACART (Fritzon, et al., 2013)

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**Northgate Firesetting Treatment Programme**  
(Taylor, et al., 2002)

- 40-45 session, group intervention
- Men and women with ID
- Pre and post intervention testing
- Grounded in Jackson's FBA work
- Sessions include: offense analysis, self-esteem, fire safety education, communication, coping and emotion management, and relapse prevention.
- Mixed findings on multiple follow up attempts

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**Australian Center for Arson Research and Treatment-ACART**  
(Fritzon, et al., 2013)

- 14-16 weekly sessions, 2 hours
- 7 modules
- Ages 14+, males and females
- Community or correctional settings
- Recommended assessment battery
- M-TTAF trajectory determination guides treatment structure
- Flexible to allow for individual delivery as need arises
- Ongoing data analysis suggests small but positive gains

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**Australian Center for Arson Research and Treatment (ACART)**  
(Fritzon et al., 2013)

**ACART Modules**

1. Introduction, Assessments, Motivational Interviewing and Good Lives Model
2. Understanding Firesetting
3. Cognitive Distortions and Implicit Theories
4. Mood Management and Mindfulness
5. Communication and Relationships
6. Finding Solutions and Problem Solving
7. Maintaining Gains; and Relapse Prevention

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**Arson Group Treatment Program (AGTP) &  
Arson Individual Treatment Program (AITP)**  
(Annersley, 2017)

- Female, psychiatric population. UK high secure setting
- 18 month, group (N=9) and individual (N=6), pre and post testing
- Individual offered for those who were too dangerous for group
- Modules included dangerousness of firesetting, self-awareness and self-esteem, coping and social skills, trauma, and relapse prevention
- Post treatment scores showed improvement across all measures, small size is barrier to making any generalizable conclusions

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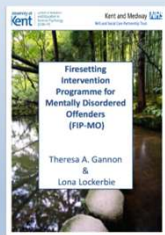
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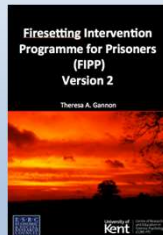
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## FIPP/FIP-MO



Patients

Male or Females  
Semi-structured Manuals  
Largely Same Content



Prisoners

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**Firesetting Intervention Programme for  
Mentally Disordered Offenders (FIP-MO)**  
(Gannon & Lockerbie, 2014)

- **Main goal:** To increase each patient's understanding of the factors associated with their firesetting and enable them to develop appropriate strategies for managing their firesetting risk.
- Grounded in Good Lives and Risk Needs Responsivity Models
- Manualized
- 28 weeks, group & individual sessions
- Pre-test/Post-test battery
- Males and females
- Primarily CBT orientation
- "flexibility is key to good firesetter treatment"

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## FIP-MO Treatment Targets

- Inappropriate fire interest
- Offense Supportive Attitudes
- Communication and Relationships
- Emotional Regulation/Coping
- Mental Illness



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## Firesetting Intervention Programme for Mentally Disordered Offenders (FIP-MO)

(Gannon & Lockerbie, 2014)

- Intro to Good Lives Model
- Understanding My Offending
- Fire Interest/Preference
- Mood and Coping
- **Fire Safety Awareness**
- Communication and Relationships
- Offence Supported Thinking
- Mental Health and Offending
- Risk and Triggers
- Exploring Offence Patterns

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## *An evaluation of a specialist firesetting treatment programme for male and female mentally disordered offenders (the FIP-MO)*

(Tyler, Gannon, Lockerbie, & O'Ciardha, 2018)

- Compared FIP-MO to TAU (Treatment As Usual) comparison group
- 12 treatment sites (low, medium, high security forensic units) vs. 14 comparison sites.
- N=63 MDF's and 72 comparison, males roughly 2:1
- Two year study period

**Note:** 7-year follow up recidivism data for a separate study of FIPP is being collected

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*An evaluation of a specialist firesetting treatment programme for male and female mentally disordered offenders (the FIP-MO)*  
(Tyler, Gannon, Lockerbie, & O'Ciardha, 2018)

### Results:

Firesetters who completed the specialist FIP-MO as compared to TAU:

- Showed significant decrease in their overall self-reported attitudes and associations with fire
- Showed significantly improved their self-reported ability to express their anger
- Reported feeling that they benefitted from attending the FIP-MO group (76.9%). They also reported that they found the individual sessions, which ran alongside the main group sessions, to be helpful (92.3%).
- Firesetters' personal self-esteem appeared to increase regardless of intervention

52

*An evaluation of a specialist firesetting treatment programme for male and female mentally disordered offenders (the FIP-MO)*  
(Tyler, Gannon, Lockerbie & O'Ciardha, 2018)

### Study Conclusion:

*"Firesetters who attended the specialist FIP-MO treatment made gains postintervention in the fire-related treatment areas (i.e., problematic interest and association with fire, fire safety awareness) and anger expression relative to a TAU comparison group. In other words, the FIP-MO treatment appeared effective for reducing key factors associated with deliberate firesetting in both male and female mentally disordered offenders relative to standard TAU. This suggests that general offending behaviour programmes are not effective in addressing specific fire-related deficits in this population; illustrating that firesetters require specialist treatment".*

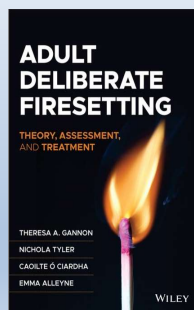
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Future Directions-Treatment  
(Gannon, et al., 2022)

Employ pre/post treatment measures targeting MTTAF factors.

Communicate behavioral follow-up data to larger community.

Utilize well matched comparison groups.



54