

## Mysterious Serial Fires in a Private Hospital – A Rare Arduous Forensic Investigation Report

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### Abstract:

Fire plays a vital role in the survival of not only early humans but also modern humans. Humans have used fire in rituals, cooking, generating heat and light, signalling, propulsion purposes, forging, cremation, and as a weapon or mode of destruction. Fire investigation is very challenging for the investigator to conclude because the physical evidence turned to ashes in the fire. Any forensic investigator's primary aim is to discover the origin and cause. The cause of the fire may be accidental, arson, natural calamities and even unknown causes. Arson is the intentional setting of fire on one's own or others' property. Understanding the psychological aspects of fire setting is essential to controlling and deterring arson. Psychology is the branch of science that deals with mental processes and behaviour. The forensic investigator must assess the involvement of any physiological behaviour to trigger the fire unconsciously to find out the origin and cause. It assists in focusing the path of investigation, identifying potential suspects, and developing appropriate techniques and strategies for interviewing the various types of firesetters. The author, also a former forensic crime scene investigator in India, presents a case study on the psychological aspects of fire investigation and the challenges faced in identifying the origin and cause of the fire.

**Keywords:** Forensic psychology, Fire scene investigation, Case study, India.

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## Introduction

Fire plays a vital role in the survival of not only early humans but also modern humans. Humans have used fire in rituals, cooking, generating heat and light, signalling, propulsion purposes, forging, cremation, and as a weapon or mode of destruction (**John, 2016**). The destruction of physical evidence, so important for identification and crime reconstruction, remains a frustrating problem (**Nataraja, 2008**). The primary aim of any forensic fire investigator is to find out the origin and cause of the fire. The cause of the fire may be accidental, arson, natural calamities and even unknown causes. Arson is an intentional set fire on one's or others' property. The investigator should observe and mentally note the scene condition, any visible victims, the damage caused by the fire, and any witnesses or bystanders. The initial observation stage can contribute to the investigation, no matter how small the details, which will lead the investigators on the right path and help them decide if the fire was caused intentionally (**David, 2019**).

The three key elements to be considered for arson include: i) there has been a burning of property, ii) the burning is incendiary in origin and iii) the burning was started with the intent of destroying the property (**Lentini, 2012**). The National Centre for Analysis for Violent Crime, USA, have classified the motives for arson as i) vandalism, ii) excitement, iii) revenge, iv) profit, v) crime concealment, and vi) extremism and to prove the commission of arson crime, the cause of the fire has to be determined (**Quintiere, 2006**). From a psychological perspective, a fire setting is viewed as a function of a disturbed personality.

Therefore, arson may be viewed as a mental health problem and not a criminal act. One of the most frequent emotions acted out by expressive arsonists is anger. Psychologists have stated that one of the reasons many offenders commit arson is because these pathological individuals redirect their anger onto buildings of owners and even parents or relatives, as they see them as easier targets and a way to channel all of their aggression (**Jackson et al., 1987**).

## History of the case

A private hospital in a town was owned and run by a young General Medical Practitioner. The ground floor of the building was used as a clinic, while the first floor was used as the residence of the doctor with his wife and a 3-year-old baby. There were six paramedical and supporting staff members, most of whom were relatives of the medical officer. One day, a fire broke out in one of the rooms during lunchtime but was put

off by the staff before spreading with little damage. The next day, around 12.30 pm, a fire broke out near the reception counter, and staff members put off the fire. Again, on the third day, a similar fire incident continued in the pharmacy room and was extinguished by the staff members. In the local area, they have a belief in witchcraft act and somebody sending fire to the clinic because the doctor had some enmity with some local people in the town. The medical officer was a rationalist, and he had not considered this a serious issue since the incidents occurred during the daytime and the damages were very meagre. The wife of the medical officer, who was also a housewife, worried about the incidents, and if they occurred at night, they might cause a major fire that even spread on the first floor where they were staying.

Finally, they complained to the town police station. The first officer, the Inspector of Police, followed by the Deputy Superintendent of Police, visited the clinic, noticed scorching marks on the place of fire, and conveyed the mysterious fire incidents to the District Superintendent of Police (SP). As advised by the SP, the district forensic scientific officer (forensic crime scene investigator, formerly T. Nataraja Moorthy, herein as TN) was requested to visit the scene and assist the police.

## Observation of the fire scene

Upon receipt of the message from the Town Police Station, TN immediately arrived at the police station and reached the place of the fire incident with the Police Inspector. TN have inquired with the medical officer and staff members of the hospital. TN observed five blackish marks (mild charring marks) near the reception counter, the wooden part in the pharmacy room, charred paper, etc. The damages were not appreciable since they were extinguished immediately after the fire. The pieces of evidence were collected and preserved for onward transmission to the Forensic Science Laboratory for analysis.

From the hospital, TN returned to the police station along with the Police Inspector. As soon as the officers reached the police station, another call was received from the same hospital, and they were informed that another fire had occurred in the hospital, so the team rushed to the hospital. The fire started on the screening cloth hanging at the entrance of the medical officer's consultation room but the medical officer was just away from the room. TN removed the cloth and observed a characteristic alcohol odour with a splash mark on the screen, which was preserved for laboratory analysis.

## Reconstruction

During the visit of TN to the hospital for a crime scene examination, he noticed one of the female supporting staff, aged about 27 years old, had voluntarily replied to all his inquiries rather than others. Keeping the screen cloth, TN entered a laboratory used for blood and urine analysis and observed a microscope, tripod stand, wire gauze, test tubes, spirit lamps/alcohol burners and other glass wares in the laboratory. There were three spirit lamps found without spirit. One of the spirit lamps was found open.

Then, all staff members were advised to wait outside the hospital except for the medical officer, and TN enquired about that particular girl. The doctor said that the girl was his relative and had worked there for about one year. He also certified that the girl was a sincere worker. However, TN had a strong suspicion about this girl's behaviour, whose village was about 150 km away from this town hospital. Then TN advised the medical officer to give her two weeks' leave for some other reason and leave for her village. Then, the inspector was advised to bring her parents to TN's office (District Mobile Forensic Science Laboratory) in the District Police Office. The next day, TN inquired about the girl. They said that she loved a boy who belonged to a different caste and wanted to marry him, but the family members opposed it. Hence, her parents brought her to the hospital to work as a support staff member. The medical officer was her relative and also knew the fact of the love affair but could not suspect her psychological behaviour, and no more fire incidents after she left the hospital. Thus, on keen crime scene observation, the girl's profiling is elucidated through analysis and reconstruction based on forensic evidence related to the girl's crime occurrence and behaviours, also known as the Psychopathic Act (Nataraja *et al.*, 2021).

## Discussion

Forensic science was born at the crime scene with silent witnesses. Only knowledgeable criminalists can locate and use to link the crime and criminals successfully (Nataraja, 2019). Fire scene investigation is a specialized discipline of forensic sciences; it is carried out mainly to answer whether a crime has been committed. Fire may be caused by natural calamities like lightning (Nataraja, 2020) or sometimes by accident (DeHaan and John, 2012). Fire may be used for our human use but also misused for crime concealment acts. The physical evidence developed during the investigation should be checked against the statements of witnesses and in this case, no witnesses are available. Only knowledgeable crime

scene investigators with the presence of mind alone can identify the evidence and solve the mystery under crime scene reconstruction (Nataraja, 2022). Most firesetters can be characterized as psychopaths or have psychopathic personalities. They often appear normal and can lead normal lives. They do not respond to punishment; that is, the fear and expectation of punishment do not appear to be their unacceptable behaviour (Dara *et al.*, 2017). In the present case report, the girl was working in the hospital and continued her day-to-day hospital activities. She impressed the medical officer through her sincerity in her work. Some investigators have found firesetters to have low basic intelligence (IQ), while others found adequate essential intelligence but poor achievement (Tim, 2017).

## Conclusion

The present case study provided a scientific solution for the cause of frequent mysterious fires that occurred in the hospital. The findings also ruled out the possibility of a "witches act", as believed by the local people. Thus, the cause of the serial set fire was forensically identified as the "psychological characteristics" of a worker of the hospital. This conclusion also cautioned the prevention of "future untoward incidents" that would cause damage to property or life.

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