

# Knowledge and Awareness Regarding Crime Scene Investigation Among Medical Students



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## Abstract

**Background:** Crime and its investigation is a part of all human societies since ages. Crime scene investigation is one of the very crucial steps to gather vital evidences.

**Materials and methods:** Total 138 medical students of 2nd MBBS were exposed to pre-tested and pre-validated Likert scale type questionnaire regarding knowledge and awareness regarding basics of crime scene investigation after obtaining their informed written consent. Data obtained were analyzed via median score and tabulated.

**Results:** Most of the students were aware that crime scene examination must be well documented and crime scene examination is very important to collect various evidences as well as it is very essential step to solve crime. Medical students had very poor knowledge and awareness regarding type of teaching and training required for crime scene investigation and students had never visited crime scene. Most of the students had seen crime scene examination videos as available on may internet websites. Students have less knowledge regarding various types of crimes which required investigation of scene, qualification and education required to be a crime scene investigator, authorities involved in crime scene investigation as well as overall concept of crime scene investigation.

**Conclusion:** Knowledge and awareness regarding crime scene investigation is overall very poor among 2nd MBBS students even though they have separate subject of Forensic Medicine in 2nd MBBS. Educational programs like interactive lecture as well as visit to mock crime scene should be required to increase knowledge and awareness among medical students because crime scene investigation is an essential step in any crime.

**Keywords:** Crime Scene Investigation; Knowledge; Awareness; Medical Students

## Introduction

Crime and its investigation are a part of all human societies since ages. Crime scene investigation is one of the very crucial steps to gather vital evidences. As per Edmund Locard's principle of exchange, whenever two objects come in contact with each other, there is always exchange of some materials in between them. Scientific approach to crime scene can collect such evidence which can be later analyzed and interpreted to solve mysteries behind murders and other crimes [1]. Crime scene and physical evidence awareness for non-forensic personnel was also given by United Nations Office on Drug and Crime (UNODC) to spread awareness among general public [2]. Medical students are aware regarding basic fundamentals of crime scene investigation as Medical Examiner system is present in USA while in country like India, where medical examiner system is not existed, knowledge and awareness among medical students need to be assessed regarding crime scene.

## Materials and Methods

Total 138 medical students of 2nd MBBS were exposed to pre-tested and pre-validated Likert scale type questionnaire (1-7, 1 - Not at all true, 7 - Very true) regarding knowledge and awareness regarding basics of crime scene investigation after obtaining their informed written consent. Study was started after obtaining ethical approval from the Institutional Ethical Committee. Data obtained were analyzed via median score and tabulated.

## Results

Total 138 students were participated in the present study, out of which properly filled and responded 100 questionnaires were taken into consideration for data analysis while rest of improperly filled questionnaire were not taken into consideration. Out of 100 respondents, 52 were male and 48 were female.

Most of the students were aware that crime scene examination must be well documented and crime scene examination is very important to collect various evidences as well as it is very essential step to solve crime. Medical students had very poor knowledge and awareness regarding type of teaching and training required for crime scene investigation and students had never visited crime scene. Most of the students had seen crime scene examination videos as available on May internet websites. Students have less knowledge regarding various types of crimes which required investigation of scene, qualification and education required to be a crime scene investigator; authorities involved in crime scene investigation as well as overall concept of crime scene investigation (Table 1).

**Table 1:** Knowledge and Awareness regarding crime scene investigation among medical students (Likert scale: 1-7, 1 – Not at all true, 7 – Very true).

Sr. No.	Perceptions of students	Median score
1	I know various types of crimes which required investigation of scene.	3
2	I know the qualification and education required to be a crime scene investigator.	2
3	I am aware regarding authorities involved in crime scene investigation.	3
4	I know that crime scene investigation must be well documented.	4
5	I know that crime scene examination is important to collect essential evidence.	4
6	I know type of teaching and training required for crime scene investigation.	1
7	I know that crime scene investigation is very essential step to solve crime.	4
8	I know the concept of crime scene investigation.	3
9	I have seen videos of crime scene investigation.	5
10	I have visited crime scene in my life.	1

### Discussion

Every incident, whether it a crime, accident, natural disaster, war, or other, leaves traces at the scene of incident. The aim and objectives of the subsequent investigation is to correctly collect evidences, interpret the facts, reconstruct the events and understand what happened actually to solve mysteries. Physical evidence can be anything from micro to macro objects, generated as part of a crime and recovered at the crime scene or at related locations which in turn will be useful to solve crime. Many times, lack of search for evidence, improper collection of evidence or intrusion of unauthorized persons like general public or media may contaminate crime scene and evidence. An uncoordinated approach to crime scene can lead to misunderstanding, duplication of effort or wrong assumptions that someone else is taking care of a particular assignment will destroy prime evidence of crime and loose the case in the court of law. Approaching to crime scene as early as possible, communication

with laboratory personnel, availability of kit to collect evidence and coordination of investigating team are few factors which influence crime scene investigation and its outcome.

Crime scene must be secured to avoid risk of contamination, to maintain chain of custody and avoid tampering, proper reconstruction of crime etc. [3]. Special training is required for various types of crime like Post blast scene investigation requires specialized explosives training [4]. As well as basic knowledge regarding facts of fire [5]. Scene of road traffic accident required in depth knowledge of various patterns of injuries and how it can be occurred with which type of vehicles [6]. “Reconstruction of crime not only involves the scientific crime scene analysis, interpretation of crime scene pattern of evidence, and laboratory examination of physical evidence, but also involves systematic study of related information and the logical formulation of a theory to come to a conclusion” [7]. “Crime reconstruction requires a broad base of knowledge regarding forensic science and an ability to determine the cause from the effect” [8]. The scientific method appears very similar to the writings of Sir Arthur Conan Doyle when he stated, ‘You eliminate the impossible, then whatever is left, however improbable, is the truth’ [9,10]. Pattern of human behavior is key to reconstruct the crime and removing an artifact from its context destroys much of its potential to help reconstruct human behavior [11]. Crime scene and its study are very much important in various cases like dowry death [12], drowning [13], poisoning [14,15] and drug abuse cases [16].

### Conclusion

Knowledge and awareness regarding crime scene investigation is overall very poor among 2nd MBBS students even though they have separate subject of Forensic Medicine in 2nd MBBS. Educational programs like interactive lecture as well as visit to mock crime scene should be required to increase knowledge and awareness among medical students because crime scene investigation is an essential step in any crime. Police inquest instead of Medical Examiner System and involvement for forensic science personnel in crime scene investigation in India is one of the prime reasons for poor knowledge and awareness of medical students regarding it.

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