International Journal of Humanities and Social Science Invention (IJHSSI)
ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714
www.ijhssi.org ||Volume 14 Issue 6 || June 2025 || PP. 37-43

Role of Physical Evidences in Crime Scene Investigation: An Analysis

Snigdha Kuriyal
Assistant Professor, Lloyd Law College.

Abstract
The role of forensic science services starts at the crime scene with the recognition and recovery of physical evidence. It proceeds with its analysis and the evaluation of the results in a laboratory, and the presentation of the findings to judges, prosecutors, lawyers and others in need of the factual information. From the first responders to the end-users of the information, all personnel involved should have an adequate understanding of the forensic process, the scientific disciplines and the specialized services provided by forensic laboratories. Under ideal circumstances, crime scene investigators who have received full-fledged forensic training quickly take over the work at the scene. However, there are situations that may require first responders (who are normally not expected to further process the scene) to carry out some basic recovery procedures before the arrival of the crime scene investigators, if there is a risk of the evidence being destroyed, lost or contaminated. In this paper, the author aims to describe the types of physical evidence most commonly encountered at the crime scene and also outline basic actions required to preserve and document crime scene and recover physical evidence traces from crime scenes.

Keywords: *Forensic Science, Physical evidence, Crime Investigation, Examination, Criminal Justice.*

I. INTRODUCTION

There are always remnants of any incident, whether it be a crime, accident, natural disaster, armed conflict, or something else. The inquiry that follows aims to accurately analyze the facts, recreate the incidents, and comprehend what transpired. Due to the fleeting and delicate nature of those traces, the event scene's early response has a significant impact on both the dependability of those traces as well as the maintenance of their physical integrity. Numerous criminal court cases entail the evaluation of tangible evidence and, in the end, expert testimony that might connect a defendant to a crime. In criminal court trials, human physical evidence such as fingerprints, hair, and serology (blood, semen, etc.) are routinely presented. These types of evidence are based on probability theory and are regarded as circumstantial.[1] The courts have developed and accepted probability requirements for serology and fingerprints. These criteria take into account the presence or absence of specific traits or "points" of comparison between accepted and disputed pieces of evidence.[2] The likelihood that the disputed piece of evidence came from the suspect increases with the number of points of comparison present. For fingerprints and serology, the frequency of these sites of comparison within populations has been well documented.[3] But there are no such guidelines for identifying human hair.

The majority of officers do not make the best use of physical evidence, although this is not entirely their fault since it is a laboratory's job to familiarize investigating officers with the significance, restrictions, collection, transmission, and practical interpretation of physical evidence. In the forensic laboratories, it is the task of forensic scientists to analyze physical evidence, e.g., all sorts of biological evidence, one of the most crucial evidence-latent fingerprints, fired bullets, questioned documents, and so on, to determine class and individual characteristics in order to establish an identity between the crime scene evidence and the comparison-test standard. In forensics, there are two kinds of characteristics namely 'Individual characteristics' & 'Class characteristics' wherein the class characteristics provide the basis for identification and the individual characteristics provide the basis for establishing an identity.

Forensic Science has been defined by the Midwest Forensics Resource Center as: *"Forensic science is the application of natural sciences to the procedures of law. In practice the subject of forensic science draws its Principles and Methods from the subjects like physics, chemistry, biology and other science subjects"*. Further, the definition given by the California Criminalistics Institute is: *"Forensic Science is the application of the*

[1] Moenssens, Inbau, & Starrs, 1986, Scientific evidence in criminal cases, 3rd ed., Mineola, New York: The Foundation Press.
[2] Curran & Shapiro, 1982, Law, Medicine, and forensic science, 2nd ed., Boston: Little, Brown and Co.
[3] Camps, 1983, Gradwohl's legal medicince, 3rd ed., Chicago: John Wright and Sons

methods and techniques of the basic sciences to legal issues. Forensic Science is a very broad field of study. It includes Crime Laboratory Scientists, sometimes called Forensic Scientists or, more properly, Criminalists, work with physical evidence collected at scenes of crimes."

It is known that by adhering to a crucial set of guiding principles, evidence reliability can be attained with very little assistance. The admissibility of evidence for use in judicial proceedings, human rights investigations, and humanitarian action depend on conducting the crime scene investigation with care, diligence and proficiency. Evidence is necessary to support or defend against claims or lawsuits, and it can take many forms. Often, it is a tangible object, i.e., physical evidence.[4] To be useful, physical evidence must be preserved, inspected and tested using methods that maintain the evidence and make it available to all interested parties. If evidence is altered or destroyed, making it useless or inadmissible, such evidence is deemed "spoliated." Parties often cannot use spoliated evidence and their legal positions are thus compromised. This outcome is obviously unfair, particularly if one party has had the benefit of testing the evidence while another is deprived of the opportunity.

Physical evidence can be anything from massive objects to microscopic items, generated as part of a crime and recovered at the scene or at related locations. Considering all sources of information available in investigations (e.g. confessions, testimonies, video surveillance, etc), physical evidence plays a pivotal and valuable role. With the exception of physical evidence, all other sources of information suffer from problems of limited reliability. Physical evidence, when it is recognized and properly handled, offers the best prospect for providing objective and reliable information about the incident under investigation.[5] However, the value of even the most carefully recovered and preserved evidence can be lost if the chain-of-custody is not properly maintained. "Chain-of-custody" is often recognized as the weak link in criminal investigations. It refers to the chronological and careful documentation of evidence to establish its connection to an alleged crime. From the beginning to the end of the forensic process, it is crucial to be able to demonstrate every single step undertaken to ensure "traceability" and "continuity" of the evidence from the crime scene to the courtroom.

In situations where there is no prospect for the crime scene to be processed by crime scene investigators, the responsibilities of the first responder might have to be extended beyond preservation and documentation activities. These situations typically occur if the crime scene is in a remote location, if skilled crime scene investigators are not easily available, or if the criminal justice system response is not adequate.

Classification of physical evidences

The physical evidences can be classified into the category of movable evidence and fixed evidence (non-movable evidence). *Movable Evidence* are those kind of evidence which can be moved easily at the crime scene. They are found to be in loose condition at the scene or on the victim or offender. Such kind of evidences are easily recovered by the investigating officer or the forensic experts and sent to laboratory for the requisite examination. The examples of such kind of evidences are bullet, hair, fiber, soil, grass particles, etc. *Fixed evidence* are those type of physical evidence which cannot be removed from the crime scene due the nature of their physical properties. The size, structure of these evidences is such that they cannot be removed from the crime scene. They are to be examined at the crime scene itself or are uplifted by the use of special techniques and then sent to the lab for examination. The examples of such evidences are fingerprints, footprints, blood stains on the floor, etc.

Types of physical evidences

The categorization of evidence has been done by various scientists in different manner. It also depends upon the sources of physical evidence which are majorly The Crime Scene, the Culprit and the Victim. However, the categorization which is most conveniently done, covering majority of the evidences are as follows: *Physical or real evidence, Testimonial or Personal Evidence, Miscellaneous Evidence and Corpus Delicti Evidence.*

Furthermore, the common types of Physical Evidence which can be examined scientifically in the laboratory, are divided in two category: Living & Non-Living.

Herein, the *Living Physical Evidence* or the biological evidence or Human Body Material comprises of Blood, Fingerprints, Hair, Semen, etc.

Blood: The identification, origin, and then individuality of the blood and other bodily fluids will be ascertained through biochemical and other examination. An investigator may be able to make a number of inferences about what transpired at a site by looking at the quantity, color, and distribution of such fluids. A smear could be the result of a body being dragged or cleaned up.

Fingerprint: According to Locard's principle of exchange, practically everyone is aware that a fingerprint is left behind when a person touches anything with their bare hands. Since these prints cannot be seen with the

[4] Osterburg, J. (1969). The Evaluation of Physical Evidence in Criminalistics: Subjective or Objective Process? The Journal of Criminal Law, Criminology, and Police Science,60(1), 97-101

[5] Sensabaugh, 1982, Biochemical markers of individuality, R. Saferstein Ed., Forensic science handbook. Englewood Cliffs, New Jersey: Prentice-Hall

naked human eye, they are known as latent prints. The task facing the forensic scientist is to create these latent prints so that their owners can be recognized.
Hair: With the use of a microscope, it is rather simple to compare and identify hair, which is most frequently discovered at crime scenes. Any hair from an animal or a human found at the scene may be used to connect a person or animal to a crime. Hairs from a crime scene may be linked with a suspect with a high degree of certainty if there are several samples to compare.
Semen: Semen and sperm can be significant to a criminal investigation. In the event of a suspected rape, the visual detection of semen can offer evidence. Moreover, genetic material.

Non-Living Physical Evidence includes Glass shards, Paint, Fiber, Firearms, ammunitions, Gunshot residue, Questioned Document, Marks (Foot, tool, tire), Drugs, etc.
Glass Pieces/Shards: Glass panes, particles, or shards from windows or ventilators that are discovered on or transferred to a suspect or a crime scene may constitute strong evidence. Such evidence, whether shattered by a bullet or another object, may aid in tying a suspect or object of evidence to a crime scene and be utilized to determine the reason for the fracture as well as the direction and angle of penetration. Broken glass also frequently serves as a substrate for the presence of blood and fingerprints.
Paint: During the commission of a crime, paint evidence in the forms of smear, chip, or dried may be transferred from the surface of one object to another. The majority of paint evidence comes from hit-and-run accidents.
Fibers: Both natural and manufactured fibers are easily passed from one person to another or from one object to another. Can establish a relationship between objects and/or people if properly collected and assessed. Fibers are inspected virtually exactly like hairs, with the exception of DNA analysis. A match is frequently made with a high degree of accuracy when control fibers are provided for comparison. An expert observer can offer important information about a fiber's origin in the absence of control fibers.
Firearms & ammunitions: In any firing investigation, firearms and intact or discharged ammunition are frequently significant pieces of evidence. In reality, without the finding of such evidences, it is very impossible to obtain a conviction in shooting instances. A fired bullet or used cartridge case may be traced to a weapon when someone is carrying a suspected weapon, just as a fingerprint can be matched to a finger.
Gunshot residue: It is possible to suspect someone or something of having gunshot residue or other gunpowder-related debris. Powder residue can be utilized to determine whether, when, and where a firearm may have been fired by determining its existence and distribution. It is virtually hard to fire a firearm without leaving such evidence behind on a target or surrounding area.
Marks (Foot, tool, tire): Tool marks, tire prints, shoe prints, depressions in soft or loose soil, all other sorts of track impressions, bite marks on the skin, and other food impressions are examples of 3D impressions. Any thing with various tool marks on it that was made by another object will be used as a tool in a crime.
Questioned Document: Any questioned document, whether typewritten or written by hand, is delivered to the lab so that its authenticity and origin can be established. Mostly used with ransom letters, suicide notes, death threats, and forgeries, these forms of analyses are used to identify fraud.
Drugs: Drugs are substances that contravene the rules governing the use, distribution, sale, and manufacture of drugs or chemicals and must thus be seized. Many people who commit other crimes also use drugs as a cover for their misdeeds. The manufacture of drugs is a significant industry.
All these evidences play a very crucial role in the criminal investigation. It is not just aiding in investigation rather giving investigation the right direction. The purpose of forensic science is to build a connection between the perpetrator and the victim by examining of evidences through scientific methods which thereby provide a link to the crime scene. In other words, the analysis of physical evidence[6] found with the victim, accused and at crime scene helps in building a connection between the victim and culprits. Nothing can prove more helpful to the criminal investigator than the usage and application of forensic science concepts when it comes to the degree of inquiry, regardless of the severity of the case. The outcomes of those forensic investigations may determine whether a defendant is found guilty or innocent in a court of law. It can be seen, to help with criminal investigations, forensic science has significantly advanced.
Criminal investigation is an applied discipline that involves the analysis of evidence to classify, unearth, and show the guilt of an accused criminal. A thorough criminal investigation may involve questioning, consultations, cross-examinations, evidence collection, preservation, and a variety of investigative techniques.[7] In simple terms, criminal investigations are a component of the criminal justice system. It has been observed that very organized and cultural societies around the world have evolved and developed a system of justice to prevent law violations, to enforce the law, to deal with law breakers, and to comfort the victims so that society and the nation can function

[6] H. Ward Smith, The Journal of Criminal Law, Criminology, and Police Science, Vol. 48, No. 1 (May - Jun., 1957), pp. 93-102.
[7] Charles E. O'Hara & Gregory L. O'Hara, Fundamentals of Criminal Investigation (Sixth Edition, 1994).

well and that its citizens can live their lives happily and work in a colorful, blissful, and harmonious environment. Enforcing the rules of behavior required to safeguard persons is the primary goal of an effective criminal justice system. In all its numerous elements, forensic science[8] aids criminal investigations and is essential to maintaining law and order in society. Criminal investigations cannot function without it; the two are inseparable.

The Tandoor Murder Case[9], was the nation of India's first criminal case to be resolved with the use of forensics. In this instance, Sushil Sharma killed his wife by shooting bullets into her body after believing she was having an extramarital affair with another congressman and classmate Matloob Karim. After carrying out the immoral deed, he drove her body to the Bagiya restaurant where he and Keshav Kumar, the restaurant manager, attempted to burn her in a tandoor. Sharma's gun and blood-stained clothing were found by police, who then transported them to the forensic lab on Lodhi Road. The parents of Sahni, Harbhajan Singh and Jaswant Kaur, had blood samples taken of them as well, and they were flown to Hyderabad for a DNA test. DNA testing proved beyond a reasonable doubt that the charred body was that of Naina Sahni, who is the biological child of Mr. Harbhajan Singh and Jaswant Kaur, according to lab records that confirmed the body was that of Sushil Sharma's wife. Finally, using forensic evidence, Mr. Sushil Sharma was determined to be guilty.

In Aarushi Talwar case[10], the 14-year-old daughter of a prosperous dental couple, Aarushi Talwar, was discovered strangled and murdered in her parents' Jalvayu Vihar home in Noida, an upscale neighborhood of Delhi. Yam Prasad Banjade, alias Hemraj, a 45-year-old Nepalese native who worked as a live-in man-servant for the family and was discovered gone from the house, was immediately suspected. But later, after the investigations were finished, it was discovered that her parents had actually perpetrated the murder, which led to the designation of the incident as an honor killing.

In *Harpal Singh v. State Of H.P*,[11] The age of the girl was the relevant fact in this case. Her age was determined using scientific methods, and the results of her medical tests and school records, which were both verified by the headmaster and the girl's entry in the birth register, corroborated each other.

The rape and murder of Priyadarshani Matoo[12] was the case that brought DNA issue to the fore in the Indian legal system. This case depended on DNA tests performed on vaginal swabs taken from the deceased during the trial, which ultimately proved successful and brought about justice. The same DNA testing technology has also assisted in proving that Rajendra Mushahary, a former minister who belonged to the Asom Gana Parishad, had twice raped a woman and caused her to become pregnant, leading to his being assumed to be the child's father.[13] By analyzing Dhannu's dismembered body, this DNA testing method helped bring the murderer of Rajiv Ghandhi[14] to justice. Similar to the 9/11 terrorist attack on the WTO building in New York, DNA testing was used to identify the bodies of the deceased.

Every crime scene is different, possibly for a specific reason or due to the way the crime was committed. Almost anything that is present at a scene can be considered physical evidence in one way or another since the breadth of human activity is so varied. The physical evidence can play a crucial role in connecting the suspect and victim with one another and with the location of the crime if it is recognized, handled properly at the scene of the crime, and expertly studied and evaluated in the laboratory.

After the physical evidence has been properly identified at the crime scene, it must be appropriately collected, packed, and sent to the forensic science laboratory along with a list of the necessary analyses. In order to finally reconstruct the event, it is primarily concerned with identifying and individualizing traces of evidence and determining a shared origin for samples of evidence. The identification and gathering of physical evidence at the crime site is where the forensic scientist's job begins. It then continues with its study, evaluates the outcomes in a forensic science lab, and presents the results in the form report to courts, prosecutors, and attorneys. All workers involved, from the initial responders to the information's final users, should be adequately knowledgeable about the forensic process, the scientific disciplines, and the specialized services offered by forensic laboratories.

Along with other things, physical evidence plays a big role in: Locating the offender at the scene; Connecting a suspect with a weapon; Defining the dimensions of the crime scene; Recognizing a core crime scene from a minor criminal scene; Linking the vehicle used in abduction, the dump location, and the crime scene; Supporting or disputing witness claims.

The significance of each evidence is often unknown at the time of collection from scene of crime but as the investigation proceeds further seemingly important evidence at the time of collection may not be able to

[8] James W. Osterburg, The Journal of Criminal Law, Criminology, and Police Science, Vol. 60, No. 1 (Mar., 1969), pp. 97-101

[9] Sushil Sharma v. State of Delhi (2014) 4, SCC, 317

[10] Dr Rajesh Talwar & Anr v. CBI: 2013(82) ACC 303

[11] (1999) 8, SLC 679.

[12] CBI vs Santosh Singh, 2007 CriLJ 964, 133.

[13] Pranam Kumar Rout, DNA Test A Forensic Boon, Criminal Law Journal,2003.

[14] State of Tamil Nadu v. Nalini & Ors; 1996(6), SCC, 241.

contribute much and vice -versa. For these reasons, the forensic scientist needs to cover every corner of the crime scene and treat each and every piece of evidence as vital. So every little object at a crime scene must be considered to be significant until thoroughly examined in the laboratory or investigation reached to the fruitful conclusion. Most of the time, just a handful of the items gathered at a crime scene yield useful evidence for forensic specialists. Although it may seem that most evidence inspection is not very productive, the discovery of unexpected evidence, such as a finger print or hair, can completely change the course of an inquiry.

II. RESEARCH METHODOLOGY

The research methodology adopted and applied by the researchers in this research study is basically doctrinal. The tools of data collection are books upon the subject of eminent writers and scholars, available in various libraries and other places; the reports of the various government authorities as well as special reports of the special committees and commissions constituted by the government of India or the State government (if any); reports of the non-governmental organizations; scholarly articles on the subject of this research written by various scholars in different law journals, magazines, newspapers and websites.

III. LITERATURE REVIEW

Smith, H. W. (1957), the author in the paper talks about the physical evidence in context of traffic accidents. Herein, the author has incorporated various kinds of physical evidences which may be found at the crime scene of a traffic accident namely glass and glass fragments, fragments of paint and paint smears, piece of metal, brush marks and impressions of clothing, fibers, hairs, blood stains, earth, debris and grease. This list is not complete but represents most common type of materials. Actually, more unusual materials, for example an unusual stain or marking may have even greater significance in some cases. These materials are not only of interest in themselves but are of interest because of their location, therefore, it is essential that they be carefully described, measured, and photographed before being collected. The author has dealt in detail about them in the paper. Further, the author has incorporated the examination of the physical evidence in motor vehicle accidents. The author under it, has extensively dealt about the examination of various parts of the car, like exterior surface, underneath the car, door handles, bumpers and bumper guards, etc. Furthermore, the author also mentions the materials required for collection of samples. He also gives various factors in establishing the identity in this case.

Osterburg, J.W (1969), the author in this paper talks about criminalistics and the evaluation of physical evidence under it. Herein, the author the class and individual characteristics in various type of evidence. Further, the author has dealt in details about the examples involving a variety of types of physical evidences like fingerprints, toolmarks, firearms and questioned documents. Furthermore, the author in the paper describes the recognition of unusual characteristics, wherein he says that no set number of individual characteristics exists for establishing an identity, there is general agreement that an "unusual" characteristic has greater significance than those which are more common and that fewer of the former are required. In a borderline case judgment of identity or nonidentity may rest upon the presence of at least one unusual characteristic when the total number is small. The judgment of unusualness is based on the experience and training of the expert as is judgment of identity. Clearly then, the question of unusualness is of critical significance in the process of individualization Also, the author has incorporated the evidence evaluation based on frequency distribution.

Miller, L.S. (1987), the author in this paper talks about the human hair identification. it says that hair cannot be “individualized” as with fingerprints. The characteristics of the human hair vary within a single individual. Further no single hair cannot be said to come from a particular individual with the same measure of certainty as fingerprints. The procedure of the examination and identification of human hair involves obtaining hair samples from a suspect for comparison purposes. The author in the paper has given a comparison of the conventional examination procedure (known versus questioned samples) with an alternative procedure (a lineup of samples) designed to limit the influence of factors that contribute to error by producing the data of the experiment. These experiments were designed to limit the influence of factors that contribute to error and it was seen that the alternative procedure produced fewer incorrect conclusions (3.8%) than the conventional procedure (30.4%). Furthermore, in this paper the author talks about the possible sources of influence or bias that may be responsible for examiner errors.

Wakefield, J.C., Skene, A. M., Smith, A. F. M., Evett, I.W. (1991), the authors in this paper talks about the evidential content of fibres by evaluating it using a Bayesian approach. Whenever a crime is committed, there is a possibility that fibres are left at the crime scene. The paper consists of numerical and modelling issues associated with the extension of the problem to several recovered fibres. The paper also provides with the database information wherein the database identifies 13 different fiber types, of which six types make up 98% of all samples. The most common fiber type is cotton, of which there are 2340 samples within the database. The most common synthetic fibre is polyester, of which there are 1512 sample. The author in the paper exhibits an important and newly emerging applications field, a class of interesting and novel modelling problems, involving both likelihood and prior specification, and some possible solutions. However, their main focus will be on the statistical

aspects of the problem. Further, they deal with modelling the variability of observed chromaticity coordinates among fibres from the same garment. They also deal with modelling the prior (population) distribution of the parameters involved in modelling within garment variability. Computational problems are discussed and extensions and refinements of the methodology are also examined. Various illustrative analyses from actual casework have also been incorporated in the paper by the authors.

Ulery, B.T., Hicklin, R. A., Buscaglia, J, Roberts, M.A., Fienberg, S.E. (2011), the authors in this paper talks about accuracy and reliability of the later fingerprint decisions by the examiners. In the paper, authors have focused their research on the development of empirical approaches to studying this problem of latent fingerprint decisions. Latent print examination can be complex because latent fingerprints are often small, unclear, distorted, smudged, or contain few features; which can overlap with other prints or appear on complex backgrounds; can contain artifacts from the collection process. Because of this complexity, experts must be trained in working with the various difficult attributes of latents. The main objectives of the authors in this study were to determine the frequency of false positive and false negative errors, the extent of consensus among examiners, and factors contributing to variability in results. They designed the study to enable additional exploratory analyses and gain insight in support of the larger research effort. In the result it was found that true negative rate was greater than the true positive rate.

IV. FINDINGS AND CONCLUSIONS

Scene preservation starts as soon as possible after the incident is discovered and reported to the appropriate authorities. Concerns for scene protection end only at the point where the scene investigation process is completed and the scene is released. Because each crime scene is in some way unique, planning and organization require adaptation and flexibility from one case to another. In addition, during the course of an investigation, the requirements may change as new elements are recognized and the personnel working at the scene may have to adapt the organization of the work accordingly. The equipment required for crime scene work is typically available to the personnel working at the scene, readily put together in a box/kit and replenished regularly, to enable rapid response. Some cases may also require specialized equipment.

Documentation starts with the arrival of the first person at the scene. Using appropriate means (e.g. notes, photography, video, sketches and measurements), the scene as it is first encountered is recorded, including, among other things, arrival time, status of doors, windows and shades, odours, signs of activities. Any person present at, entering or leaving the scene and any changes that take place as a result of activity undertaken or observed are recorded as well. Once physical evidence is recognized, detailed documentation is made before it is moved or recovered. Each recovered item is labelled individually.

Locating and identifying physical evidence at crime scenes, as well as identifying potentially missing evidence, is very challenging and is much more difficult and demanding than it might appear to those unfamiliar with crime scene investigation. The most relevant and important evidence may not be obvious or directly visible to the naked eye. The construction of an exhaustive listing of the steps to recognize evidence at crime scenes is not possible.

At the crime scene, the organization and coordination of the work is based on an initial scene evaluation. This takes place before the actual forensic work at the scene. Organization and coordination continue throughout the investigation and include what needs to be done (i.e. the sequence of actions, priorities), who is allowed to enter the scene (i.e. the access is limited to personnel playing an essential role in the crime scene investigation and in the medical care of victims present at the scene), who is responsible for which tasks (e.g. designation of a leader, definition of roles and responsibilities, assignment of tasks and need for specialized expertise) and how required actions will be undertaken (e.g. applicable procedures, need for specialized equipment and tools and required communication channels).

Additionally, the observations and conclusions listed below are present:

1. Unnecessary activity at a scene where it is not properly secured and preserved will cause irreversible modification, contamination, and compromise of the scene and its evidence.
2. A lack of protective safeguards may lead to the deterioration of crucial evidence, which could lead to investigators being led off track and harm the investigation's outcome. In the worst case scenario, it can obstruct the case's resolution or lead to an incorrect conclusion.
3. If workers at the location do not wear protective clothes consistently or at all, the area will become permanently contaminated (examples include hair, fingerprints, shoeprints, and cigarettes left behind by workers). The contaminations can finally make it impossible to solve the case.
4. Not wearing protective equipment or using it improperly exposes workers to avoidable health and safety risks.
5. Once the scene has been made public, chances to make corrections or recover unrecognized or missed evidence are few.

6. Useful information that is present at the crime scene but is not recognized cannot help solve a case. It could be irretrievably lost or lead to an expensive and fruitless investigation.
7. If only the most obvious and visible evidence is recovered, it's possible to leave the most important evidence behind.
8. Appropriate recovery techniques prevent the loss, deterioration, or contamination of the proof.
9. Randomly collecting evidence could potentially fill the lab with useless materials and impede the investigation.

V. SUGGESTIONS

1. Wherever possible, trained personnel should gather physical evidence. In some circumstances, a high level of training may be required (for instance, during a medical examination of a person). Samples can occasionally be taken by employees with minimal training;
2. Equipment for the staff that is suitable for the matter being examined should be provided. Clothing for health and safety, cameras, video equipment (if available), collection bags, boxes, and suitable containers, labels, and record sheets should all be included.
3. To prevent evidence from being lost or degrading before it is examined in a forensic science laboratory, appropriate storage facilities should be offered.
4. Investigators should provide forensic experts with as much information about the case as they can. The investigator should specify their goals and collaborate with the forensic team to develop a forensic strategy;
5. The strategy must be flexible and adaptable to new information. The investigator and anyone with forensic competence should maintain an ongoing, active review of it.