Public Welfare: The Forensic Psychological Tools Employed Towards a Crime Free Society

Asha Srivastava¹ and Sunita Singh²

¹SSO-I & HOD, Forensic Psychology Division Central Forensic Science Laboratory, New Delhi ²Department of Biochemistry, Shivaji College ((ACCREDITED WITH GRADE 'A' BY NAAC) University of Delhi, Raja Garden, New Delhi E-mail: ¹ashacbi@gmail.com, ²sunita_iitd@yahoo.com

Abstract—Within the justice system, there appears to be growing demand for experts in the field of behavioral science who can help law enforcement solve peculiar and unusual cases. As the crime rate grows in the country and the criminals are more complicated the investigative tools of the experts are required be more sophisticated. There are multiple factors and precursor events that are involved in a crime. These factors and events include the intent, the plan, the type of criminal, the type of victim, the crime scene. To arrive at the truth, the investigating agencies seek help from various branches of Forensic Sciences and to the question whether the written or oral testimony of an individual is true or false, application of Forensic Psychological techniques appear to be a very plausible answer.

1. INTRODUCTION

Within the justice system, there appears to be a growing demand for experts in the field of behavioural science who can help law enforcement to solve peculiar and unusual cases. As the crime rate grows in the country and the criminals are more complicated the Crime investigation requires a highly technical and specialization approach. There are multiple factors and precursor events that are involved in a crime. These factors and events include the intent, the plan, the type of criminal, the type of victim, the crime scene. The detection of deception is an important part of the investigator's role. A number of techniques have been developed to assist officers in this process and these draw upon a range of criteria thought to be associated with deceiving behaviour.

Psychology is the behavioural subject aimed to study the behaviour and mental process of humans. In the field of "forensics" Forensic Psychology is the only discipline that deals with living human beings. In some criminal cases, material evidences, eye witnesses may not available. But in all probability the case will have some suspects and victims i.e., human behaviour in investigation through psychological technique can be useful for investigating officer. As the crime and the criminal i.e., human being are unique; the individuals to be studied in detail. The behaviour of the suspect to be studied and interpreted with reference to the crime and its circumstances.

Recent Forensic psychological tools

- Polygraph
- Criminal Profiling
- Forensic Psychological Assessment
- Narco-Analysis

1. Polygraph

The polygraph technique, known popularly as "lie detection" has been in use in the United States for almost a hundred years. Over the last few decades, polygraph examinations have proven to be one of the most powerful, strong and useful scientific tools in criminal investigations and personnel screening, and it is being used in almost all major investigations. Prosecutors routinely make use of polygraph examinations to decide whether and which legal charges to file. It is well publicised that agencies like the CIA, FBI, National Security Agency, C.B.I., US Secret Service and the US Department of Defence employ polygraph examinations for investigations and personnel screening. Today, polygraph examination is used in more than 56 countries world-wide, including Canada, China, Israel, India, Japan, Mexico, Pakistan, Romania, Russia, Singapore, South Korea, Taiwan, etc. Since the development of Polygraph [Lie-Detector] around the 1920's in U.S.A. it has attained a place of importance as a useful scientific tool in criminal investigation.

The primary value of utilizing the polygraph technique in crime investigation is to differentiate between the guilty and the innocent suspects during an investigation. The polygraph technique is a non-accusatory diagnostic procedure that allows an examiner to collect physiological data to infer whether a subject's statement is truthful or otherwise. Psycho physiological detection techniques are widely used in crime investigation. In India during a short span of years it has provided scientific support in criminal investigation. Polygraph test provides an approximately accurate, economical and timely solution to the central problem in the

fight against criminal. Polygraph test results can produce a significant scientific breakthrough in a crime case. Polygraph is an aid in determining who has participated in criminal acts, directly or indirectly.

The lie-detection or truth verification technique by utilizing the Polygraph equipment was introduced in India for the first time in Central Forensic Science Laboratory primarily attached to Central Bureau of Investigation at New Delhi. A full-fledged Lie-detection Division was established in the year 1972-73 in order to provide scientific support for verifying the veracity of statements of subjects involved in criminal cases during investigation. The main clientele were the Central Bureau of Investigation and Delhi Police. Since January 1974 till date the Lie-detection division has provided necessary assistance to CBI, Delhi Police, other state Police departments, Vigilance Department, Armed Forces, Judiciary etc.. Afterwards among other states of India- the States of Haryana, Gujarat, Karnataka, Andhra Pradesh, Kerala, Rajasthan, Jammu and Kashmir, Orissa, Maharashtra and Uttar Pradesh also established the Lie-Detection Division in their State Forensic Science Laboratories. At present in Delhi, the Capital city of India has two more Lie Detection Divisions i.e. one in Delhi State Forensic Science Laboratory and National Institute of Forensic Sciences and Criminology besides Central Forensic Science Laboratory, CBI and New Delhi.

The equipment which is used for the purpose of truth verification/lie-detection is called "polygraph". The word polygraph means many writings simultaneously. As the name indicates the equipment can simultaneously record more than one physiological response and the changes therein. The technique is available for the investigating agencies for interrogation of suspects, witness and complaints. The primary value of utilizing the polygraph technique in crime investigation is to differentiate between guilty and innocent during investigation.

1.1 Scientific Basis of Polygraph

When a subject is put to the 'polygraph' test (Lie-detection test) the machine reflects and records only the subjects' physiological responses (change in respiration, blood pressure, and Galvanic Skin Response/reflex) to the questions asked by the expert who then interprets the polygraph chart and determines whether the subject is lying or otherwise. These physiological reaction are not controlled by the individual but are controlled by the Autonomic Nervous System (ANS). Whenever a subject consciously makes a lie, it involuntarily causes a noticeable difference respiration, blood pressure and GSR. Immediately after the lying, the physiological state also gets restored back to normal.

In Polygraph testing the receptor is the ear of the Subject, which receives the threatening question or stimulus from the Polygraphist. The stimulus is transmitted from the ear via sensory neurons into the brain where the hypothalamus analyzes, evaluates, and resolves that particular question. It

makes a decision for the subject as to whether it is a threatening or not threatening situation. If affirmative, the hypothalamus immediately activates the sympathetic subdivision of the autonomous nervous system. This process is called the reflex arc.

1.2 Physiological parameters of polygraph examination

The computerized polygraph equipment records following physiological parameters and the changes therein for the verification of veracity of statement given by an individual:

- Respiration
- Blood Pressure & Pulse Rate
- Galvanic Skin Response/Reflex
- Polygraph Equipment

Instrument consists of two Pnemograph Sensors



Pneumograph will record changes in respiratory rate. Pneumograph one will record change in thoracic respiration and Pneumograph two record change in abdominal respiration.

Galvanic Skin Response/Reflex Sensor(GSR)



Galvanic Skin Response/reflex or Electro Dermal Response (EDR), will record change in skin electrical conductance, which varies with skin moisture level.

Blood Pressure Cuff



Blood pressure cuff is used for recording relative blood pressure. Besides the above principal requirements, the optional physical parameter like Activity monitor sensor to detect counter measure.

1.3 Polygraph examination procedure

Discussion and Presentation of facts by the IO in detail and finalizing the issues for conducting the polygraph examination. There are relevant facts which are not available in black and white. These facts may have an important bearing on the case and for conducting a successful polygraph.

1.3.1 Pre-test Interview

A brief pretest interview requires to be conducted with a view to establish the rapport and at the same point to assess the mental fitness of the subject. In the Pretest interview examiner assess the personality, general nervousness of the subject and prepares him/her for Polygraph test. The main objectives of pre-test interview are to establish rapport with the Subject and to remove unfound fear from the subject. The Pre-test interview is that portion of the Polygraph examination that involves all communications between the examiner and examinee prior to the formal testing phase of the examination. The main objective of pre-test is to convince the examinee that the Polygraph is highly effective and examiner provides a personalized and convincing description of the rational and procedure of the exam. The other objective of pretest is to provoke and observe very carefully various behaviors indicative of the examinee's deception or honesty regarding the crime in question. The examiner observe how the examinee responds to various inquiries such as

Whether the examinee committed the crime, whether the examinee believes that he/she will pass the exam, how the examinee feels about the hypothetical offender or the polygraph itself, whether the examinee can identify other suspects.

A well-planned pre-test interview should be completed in 30 to 40 minutes, depending upon the nature of case. The length of the pretest interview should follow the guideline that it

should not be such duration as to create a release of tension to the extent that the subject will not be responsive during the examination. Irrelevant discussion should not permit to occur during the pretest interview

1.3.2 Questionnaire formulation: Questions are framed to elicit "Yes or No" response from the subject. Three types of questions are included while preparing the Questionnaire.

- **Irrelevant questions (IR):** Answers to these questions are admitted truth.
- **Relevant questions (R):** questions pertaining to the crime under investigation based on the facts of the case.
- Control/Comparison questions (C): these are probable lie questions.

1.3.3 The Examination Room

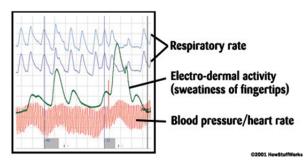
A polygraph examination requires special environment, free of artifact that might interfere with the examination such as noise, excessively low or high room temperature, distractive décor and lack of privacy.

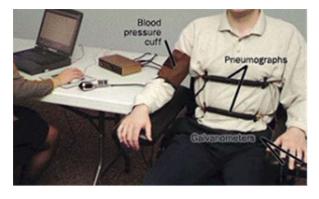
The Polygraph technique involves a diagnostic procedure. Polygraph test has to be conducted in a quiet, private, soundproof room in absolute privacy where no outsider is allowed including the Investigating officer of the case. The Polygraph examination room is designed to provide complete privacy in a professional surrounding that will convey confidence in the expertise of the Polygraphist. A polygraph suite consists of a waiting room, an examination room and a chart interpretation room. Charts should never be interpreted in front of the subject. The examination room must be soundproof from both internal and external noise. The wall should be free of any picture that may distract the subject or act as an aid at dissociation. The polygraph examination room is designed to provide complete privacy in a professional surrounding that will convey confidence in the expertise of the Polygraphist.

1.3.4 Examination: The examination of the subject on polygraph equipment is conducted in following steps:

- Familiarize the examinee with the examination room and polygraph equipment.
- Recording of normal physiological parameters after the sensors are attached to the examinee.
- Review of questions before actual recording to familiarize the questionnaire with the examinee.
- Administration of the Questionnaire: Each questionnaire is administrated minimum three times.
- Finally test recording is done after administration of all the questionnaire(s).

Model chart and polygraph examination in progress





- After Test interview: An opportunity is given to the examinee to account for the deceptions evidenced on his graph f the reactions are indicative of guilt.
- Analysis of Polygraph charts and formulation of Report.

2. CRIMINAL PROFILING

Criminal profiling is the process of developing "profiles" or descriptions of characteristics and traits of unknown perpetrators in criminal cases. Criminal profiling is often used in cases where law enforcement officers have no suspects for a crime. Criminal profiling, also known as offender profiling, criminal personality profiling, criminal investigative analysis, criminological profiling, and behavioural profiling, should not be confused with psychological profiling. Criminal profiling can be described as a forensic technique which aims at providing the investigating agencies the specific information which will help focus attention on individuals with personality traits compatible with the traits of other perpetrators of similar offenses. In other words criminal profiling is a process of identifying personality traits, behavioural tendencies and demographic variable of an offender based on the characteristics of the crime.

Criminal profiling consists of analyzing a crime scene and using the information to determine the identity of the perpetrator. While this doesn't directly give the perpetrator's name, it is very helpful in narrowing down suspects. For example, a profile based on a crime scene provides information that may include the perpetrator's personality, sex, age, ethnic background, and possible physical features such as

disfigurements or height and weight. This information can then be used to identify possible suspects, depending on who fits the profile. Personality is one of the most important parts of a criminal profile. Criminal profiling is the process of using psychological and criminal principles to create profiles of offenders. These profiles can then be used to find the person responsible for the crime. Criminal profiling has been used for over a hundred years, but it was made famous by the FBI during the 1960s and 1970s. During this time, top FBI profilers developed a step-by-step method to use profiling to apprehend criminals. This process also explains how criminal profiling works.

The crime scene provides ample clue to the personality characteristics of the criminal. Criminal profiling is a process that begins with a careful analysis of physical evidence available at the individual crime scenes. Criminal profiling is to use information gathered from the scene of crime, witnesses and victims in order to formulate a specific biographical sketch of the perpetrator of the crime .By compiling typical offender characteristics observed in similar previous crimes, the investigator of any crime may be more focused in one particular direction and resources may be diverted to more pinpointed direction. The deliberate analysis of physical evidence at individual crime scenes may be used in explaining the behaviour and motivations of specific offenders involved in those specific crime scenes .Criminal profile represents a form of expert opinion that is provided by one party to another party who seeks an opinion concerning the likely perpetrator[s] of a crime or series of crimes. The process of profiling generally involves seven steps:

- 1. Evaluation of the criminal act itself
- Comprehensive evaluation of the specific of the crime scene(s)
- 3. Comprehensive analysis of the victim
- 4. Evaluation of the preliminary report
- 5. Evaluation of the medical examiner's autopsy report
- 6. Development of profile with critical offender characteristics and
- 7. Investigative suggestions predicted upon construction of the profile.

Criminal profiling is an investigative technique that uses crime scene characteristics to generate probable descriptive information about the behaviors and the personality of an offender, narrowing the field of suspects, and aiding in apprehension efforts.

Profiling may use a mix of Psychological, Sociological and socio-legal theories and concepts to try and establish something of the characteristics of the offender.

2.1 Type of Profiling

Three types of profiling should be carefully distinguished among others:

- **Crime Scene Profiling:** uses information from the scene of the crime (physical and other evidence) to generate a full picture of the unknown offender.
- Psychological Profiling: the use of standard personality tests together with interviewing in order to assess the extent to which the individual fits the known personality template of a certain type of offender such as child sex abusers.
- Offender profiling: the collection of empirical data in order to collate a picture of the characteristics of those involved in a certain type of crime.

Psychological profiling will tend to use the expertise of a professional psychologist, who will draw on his knowledge of personality theory to attribute personality traits to the offender. Criminal Profiling will tend to use crime Scene Analysis as the base for drawing conclusion about the offender. While offender profiling will use a mix of all available information, be it from crime scene analysis to from a psychiatrist.

Terminology is not always rigorously applied in this field and other terms are used to refer to much the same type.

2.2 Purpose of Profiling

The purpose of Profiling is as follows:

- The basic purpose of criminal profiling is to provide a description of the probable (s) which will help in unfolding the facts and facets of the crime by focusing investigative resources in one particular direction.
- The main purpose of profiling is to assist the criminal justice system in the fight against crime.
- The criminal profiling can add to the thought process of the investigator (s) and help in supporting or rejecting a particular hypothesis while investigating a crime.
- The profiling can give the police a new or different direction in their attempt to catch the offender.
- The criminal profiling in conjunction with other investigative process can lead to the eventual identification of the offender.
- The criminal profiling can help in inferring offenders motivation from the reconstructed crime scene behavior as all behavior are motivated and aim at fulfillment of a need. One single behavior may have much potential motivation. A careful analysis may point out the motivation behind a particular crime scene behavior.

Criminal profiling is best viewed as a resource that can be used to assist a criminal investigation when conventional

methods employed have stalled or even failed to identify the perpetrator.

2.3 Application of Profiling

Criminal Profiling is most applicable in

- (1) Sex related assaults and homicides
- (2) Unique homicides such as those involving torture, mutilation, evisceration, and ritualistic violence
- (3) Assassination
- (4) Child molestation and abduction
- (5) Fire setting, arson and bombing and
- (6) Extortion

2.4 Method of Profiling

Criminal profiling methods seek to compile a profile of a perpetrator that may include the age, sex, ethnic and economic background, possible professions, personality traits and even physical characteristics. During an offender analysis, various aspects of the suspect's personality composition are determined from choices the individual made before, during and after the crime. This information is pooled with other relevant physical evidence and details and then compared with the characteristics of known anomalous traits and mental abnormalities to develop a working description, or profile, of the suspect.

Profiling may be achieved through inductive or deductive reasoning.

Inductive profiling involves the analysis of characteristics of other criminals (e.g. serial murders) and assumes that all serial murderers have similar characteristics. Primary users of the inductive method include the Federal Bureau of Investigation (FBI), psychologists and criminologists.

Deductive profiling on the other hand involves the construction of a criminal's characteristics based on the analysis of the forensic evidence acquired at the crime scene(s) of the offender's criminal activity. Primary users of the deductive method are those police officers who actually investigate the crime Scene.

2.5 Different Phase of Profiling

(1) Antecedent

- The antecedent phase is the first step in criminal profiling.
- Investigators or criminologists normally try to read through the mind of the offender what plan did the offender have in place before the act?
- What triggered the murderer to act some days and not others?

(2) Method and Manner

- The profilers may establish that the suspect used a knife or he used a gun
- What type of victim(s) did the murderer select?
- What was the method and manner of murder?

Shooting

Stabbing

Strangulation

Other

 This stage allows investigators to create a link between the technical aspects of the crime and the motive behind the crime

(3) Body Disposal

- The third phase; Body disposal, involves an analysis of how the offender got rid of the body if the crime under investigation is a murder.
- Did the crime and body disposal take place all at one scene?
- Multiple scenes?

(4) Post offensive Behavior

- The post offense phase involves analyzing the criminal's behavior after committing the crime.
- Is the murderer trying to inject himself into the investigation?

By:

- Reacting to media reports
- Contacting investigators crime.
- Contact the police directly through mail or through phone calls

Criminologists assert that these four phases lead to two categories of criminals i.e. the organized and the disorganized criminals.

2.6 Guideline to Investigating Officers

To begin profiling, a criminal profiler needs to examine all of the evidence from the crime scene, including pictures, sketches, witness testimony, autopsy results and any other relevant information. The only thing that profilers do not want to know about is possible suspects to prevent any influence on the profiling process. Profile of a criminal is generally developed on the basis of the clues left at the crime scene, victim's description of the criminal and his behaviour and witness account of the crime scene perpetrator. The crime scene behaviour is a reflection of the whole personality of the

perpetrator and reveals the psychodynamics process producing particular overt crime scene behaviour.

The followings items are necessary to create a profile

- 1. Complete crime Scene photographs
- 2. Neighborhood racial, ethnic and social data
- 3. Complete medical examiner's autopsy protocol
- 4. Map of the victim's travels prior to death/attack/kidnapping
- 5. Complete investigation of the incident
- 6. Complete background of the victim

3. FORENSIC PSYCHOLOGICAL ASSESSMENT

Forensic Psychological Assessment is an invaluable and inestimable tool in the understanding of individual uniqueness. It involves the psychological assessment of behaviour in legal settings or with legal application. Using in-depth interviews and a comprehensive battery of well researched and standardized test instruments with highly reliable, valid and reproducible results, a complex picture of an individual emerges. A comprehensive assessment helps explain the connection between psychological functioning and behaviour. This includes intellectual and personality functioning that can be further broken down into specific elements like emotional, cognitive, intellectual, developmental, executive, educational, social, organic, neuropsychological and physiological. The analysis and integration of these elements provided a complex psychological picture of the individual from which specific behaviours can be understood and recommendations formulated.

The Forensic Psychological Assessment measures the psychological traits of the suspected person such as personality, emotion, attitude, hostile intent, non verbal behaviour etc. These things can be measured only by the psychologist using appropriate techniques. In a controlled psychological setup, an expert can observe these cues and interpret them meaningfully to identify the truthful and deceptive person with better accuracy.

3.1 Objective of Forensic Psychological Assessment

Forensic Psychological Assessment helps the investigating agency to identify the deceptive person and to exclude the innocent person form the list of the suspects through non-invasive analysis of verbal, nonverbal, behavioural and psychological cues.

- The Forensic Psychological Assessment can be utilized for the verification of statements of accused, suspects, witnesses and complainants.
- It replaces the third degree method by scientific method.
- It assists the investigation process.

- The goal of Forensic Psychological Assessment is to obtain maximum understanding of the crime that has been committed from in all possible angles, so that justice can be done to the innocent and the real criminal is punished.
- It is very useful for white-collar criminals.
- It is purely a NON INVASIVE technique. The Forensic Psychological Assessment is conducted using set of psychological questionnaires, objective observation and verbal and non verbal responses of the suspected person. To some extent it is time consuming as it involves paperpencil tests, answering to some hypothetical questions, projective questions etc.
- No physical contact between equipment and the subject.

The Forensic Psychological Assessment is made by way of administering the:

- Appropriate Psychological questionnaire
- Behavioural Analysis Interview
- Attitude
- Verbal observation of the subject and
- Non-verbal behavioural observation of the subject.

3.2 Guidelines for Investigating Officer

The request letter for conducting the Forensic Psychological Assessment of any subject is forwarded with the following documents:

- Name of the subjects
- Copy of FIR
- Brief facts of the case
- Statement/interrogation report of the subject
- Crime scene report
- In case of violent crime medico-legal certificate
- In case of murder post-mortem report
- Justification for subjecting a particular person to Forensic Psychological Assessment
- Issues to be probed
- Forensic Inputs

The cases in which the Forensic Psychological Assessment was done in CFSL (CBI), New Delhi, the Forensic Psychologist was in a position to identify the deceptive and truthful person and the same was found to be in congruence with the investigation findings.

3.3 Advantage of the Technique

Forensic Assessment in a non- instrument analysis, it offers a considerable advantage; i.e., the absence of technology leaves the suspect less aware of what is being monitored and less guided and intimidated.

The Psychologist can evaluate a broader range of suspect responses to make a reliable assessment of the witness/suspect credibility.

The Forensic Psychological Assessment in conjunction with other forensic reports and other material evidences can lead to the investigation.

4. NARCO-ANALYSIS

Narco-analysis is known as truth serum in common parlance and it is a combination of hypnosis and narcosis. It is drug-induced hypnosis basically a technique of recovering memory Narco-analysis is a very old and well known technique widely used by the medical fraternity all over the world including India in medical health setup In the year 1940, popularity of Narco-analysis grew as an alternate to third degree as it was considered more precise and scientific technique having human approach. Narco-analysis, popularly known as 'Truth Serum Test', is psychotherapy conducted while the patient is in sleeplike state induced by barbiturates or any other drug, especially as a means of releasing repressed feelings, thoughts, or memories.

Truth Serum: It is barbiturate or drug induced in milder doses to make the recipient become more communicative and share his thoughts without hesitation. The recipient is likely to lose his inhibition and therefore, he is more likely to tell the truth. In Narco- analysis test, the accused is under the influence of drug (sodium pentothal/truth serum) makes 'confessions' in a semiconscious state. The revelation if any can be corroborated with other evidence or to support other evidence. The information, which he gives, may lead to the recovery of any incriminatory evidence that can be admissible under section 27 of Evidence Act. The administration of this test does not amount to torture of any sort or any third degree treatment. Moreover questions being asked are related only to the offence and not related to this personal life. The whole narration of the examinee during the Narco-analysis is video graphed and the same is provided to the Court. Narco-analysis in the field of crime investigation needs to be understood with reference to various provisions of Indian Constitution in the mind. Narcoanalysis is a tool which is being used by investigating agencies in criminal cases, as an interrogation technique. It was first used in 2002, in the Godhra case at DFS, Gujarat. The forensic psychologist will prepare the report about the revelations, which will be accompanied by a compact disc of audio-video recordings. The strength of the revelations, if necessary, is further verified by subjecting the person to polygraph and brain mapping test.

Narco-analysis is used only as and when the need arises in crime investigation for non —medical purposes. Using this invasive procedure for non-medical but forensic purposes for investigating a crime calls for utmost caution and care. A guideline was framed for using this technique. Jurisdictional court permission and informed consent of the subject was made mandatory for using this technique. The team conducts Narco interview after the Investigating Officer get permission from court

The Narco-analysis team will ensure physical and mental fitness of the subject and only after obtaining informed consent of the subject. Complete proceeding of the Narco interview will be video graphed. Court permission is mandatory for Narco-analysis test even if the subject volunteers for it. The examinee will also be informed that complete proceedings of Narco-analysis were being video graphed.

The actual Narco-analysis shall be done by an independent agency such as, Central Forensic Science Laboratory or Hospital preferably with a Narco team. A full narration of the Narco interview will be recorded.

4.1 How the Drug Acts

- Excessive alcohol consumption lose inhibition removes the conscious block
- The person feels more free and relaxed
- Alcohol acts as a catalyst for catharsis
- In normal persons, Sodium pentothal produces a sense of well being and feeling of serenity
- In Narco, it is used to remove conscious block- and help the person lose inhibitions
- It makes him more relaxed, comfortable, free, and conversant for catharsis

4.2 Procedure

The technique is totally invasive. Permission from the Court is required for subjecting the individual to Narco-analysis Test. The procedure is as follows:

- 5-10% of Sodium Amatol/pentothal is injected in antecubital vein.
- Not more than one gram per minute is used.
- Narco trance is established/ confirmed by Anesthetist and Psychiatrist.
- During the administration of drug Forensic psychiatrist/Psychologist interacts with the subject
- On reaching hypnotic trance state the subject is allowed to narrate the incident as free association. If there is a need

then only the psychologist facilitates by intercepting so that there is no blockage in free association.

- No leading questions are put to the examinee.
- No interrogation style of questions is used.
- Information revealed by the examinee is recorded.
- After Narco-analysis examinee is medically examined for fitness.

4.3 Venue of Narco-Analysis

The Narco-analysis test has to be done in an Operation Theatre (OT) with facilities to conduct major surgeries either in a hospital or any institution having OT facilities.

4.4 Team of Experts to Conduct Narco-Analysis

- Anaesthetist
- Psychiatrist
- Forensic/Clinical Psychologist
- Supporting nursing staff
- Videographer

The whole procedure of the Narco-analysis has to be video graphed and the record has to be maintained as these are the evidence. In case of Narco-analysis, Constitutional right of the individual is never violated because the permission of the court is always obtained prior to Narco-analysis in all cases. The subject is given opportunity to discuss with his/her Lawyer prior to register his/her consent.

4.5 Report preparation

Comprehensive report includes the questions put and the corresponding revelations. Unedited video recording in the form of CD or Tape to be provided to the forwarding authority.

5. CONCLUSION

The Forensic Psychological tools like Polygraph, Criminal Profiling, Forensic Psychological Assessment and Narco-Analysis appears to provide a very plausible answer to arrive at the truth. Thus the welfare of our society can only be safeguarded by providing criminal justice to each individual.

REFERENCES

- [1] Bami, H.L and Ganguly, A.K. (1974), "Polygraph (Le-Detectors) – Its Application and Legal Status", CBI Bulletin, Vol.VIII, No.5, May,1-8.
- [2] Ben-Shakhar, G, Bar-Hillel, M and Lieblich, I. (1986) Trail by Polygraph: Scientific and juridical issues in lie detection. Behavioral Science and the Law 4, 459-479.

- [3] John E., Reid Fred, E. Inbau. 1962. Truth and Deception-The Polygraph Technique. Second Edition, the Williams & Wilkins Company, Baltimore.
- [4] James Allan Matte. 1980. The Art and Science of Polygraph Technique. Charles C. Thomas Publishers, Springfield, Illinois, USA.
- [5] Kingsford. B: Psychology and the Detection of Lying, Police Journal (London),8:467-73,O-D.1935
- [6] Langfeld, H.S: Psycho-Physical Symptoms of Deception, Journal of Abnormal Psychology, XV:318-28,1921
- [7] Srivastava, Asha Singh, Amodh & Tiwari, Ramakant (2008) Encyclopaedia of Criminology and Forensic Science Anmol Publications Pvt. Ltd. New Delhi
- [8] Srivastava Asha & Yadav Aman (2012) 'Criminal Profiling and Crime Scene assessment: A Scientific aid to Law Enforcement Agency' in Indian Police Journal, BPR&D, MHA, Govt. of India, Vol. LIX, No. 2, April-june.
- [9] Srivastava, Asha (2010) Psychology of women, Family and Leadership MD Publication Pvt. Ltd. New Delhi.
- [10] Vaya, S.L. (2007) National Resource center of Forensic Psychology, Directorate of Forensic Science, Gandhinagar, Gujarat.

International Conference on Public Health: Issues, challenges, opportunities, prevention, awareness (Public Health: 2016)

ISBN-978-93-85822-10-0

169