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Editorial

Internal security and policing is getting more challenging and complicated in a globalized world, driven by fast-paced changes in technology and science. The emergence of new and sophisticated technology such as nanotechnolgy, bio-engineering, digital, genome, etc. is factoring a paradigm shift in policing and internal security.

With terrorists, criminals and anti-social elements getting tech-savvy and testing new technology to execute their nefarious designs, policing and internal security apparatus has to be one step ahead to rein in them and take preventive measures. As terrorism has managed to attain global dimension, spreading its poisonous tentacles with direct or indirect support from their local network, using these new technologies by security apparatus has become imperative.

Hence, in this issue IPJ (Jan-March, 2007) we seek to highlight bio-weapons and bioterrorism, nanotechnology, court monitoring system, live finger print scnner, etc., apart from other relevant topics.

In an article, 'Bioterrorism: Bioweapons and our Biodefence preparedness', Dr. Sudhir Kumar Misa, IPS, discusses what is bioweapon and how much lethal it is. He also discusses the nitty-gritty of our biodefence preparedness, and suggests some subtle measures to deal with bioattack.

Dr. Om Raj Singh, in his article, 'Emotional Intelligence at Work Place' underlines the importance of emotional intelligence in enhancing efficiency and capability manpower at work place.

Johny T. Abraham, S. K. Shukla and A. K. Singh, in their article, 'Nanotechnology in Law Enforcement and Crime Investigation', maintains that law enforcement and crime investigation can benefit a lot by using nanotechnology. Nanotechnology can usher in a new era of policing and internal security, by equipping our security apparatus with state-of-the-art gadgets and facilities.

In a path-breking article, "Use of 'Live fingerprint Scanner' for Distinguishing Illegal Immigrants", Shri S. P. Singh and Swapnil Kishore discuss the threat and challenge that policing and internal security faces from illegal immigrants. It highlights how futuristic technology like live fingerprint scanner can check and control the problem of illegal immigrants.

Shri J. R. Gaur, Narbir Singh Thakur, and V. K. Misra, in an article 'Forensic Identification of the Deadbody of a foreign national-A case report' could be established through odontological, anthropological and circumstantial evidence.

Editorial

'Forensic Support System in the Investigation of Narcotic Drugs & Psychotropic Substances' by Shri B. R. Rawt deals with the importance of forensic support, in cracking the cases related with peddling, smuggling and use of narcotic drugs and psychotropic substances.

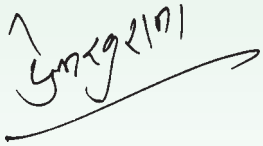
Shri Rakesh Kumar Singh in his article, 'Emotional Problems among Central Reserve Police Force Personnel: an Analytical Study' delves into the emotional problems of CRPF personnel. He comes to conclusion that behavior pattern of organization's personnel in CRPF is not up to mark and needs improvement.

'Child Trafficking - A Human rights Abuse' by Dr. Deepti Shrivastva presents a grim scenario of child trafficking, which is an outright violation of human rights. The problem of child trafficking can be handled through new supportive attitude of society, sensitization, vocational education, role of family, and sex education.

Shri Umesh Sharaf, IPS, in his article 'Court Monitoring System' discusses how an effective ' Court Monitoring System' can save precious time and material of policemen, and help them in concentrating on policing and internal security.

"A Study of the Absence of Positive Correlates between Etiology of Juvenile Delinquency and Modes of Treatment to Juvenile Delinquents in India" by Prof. D. P. Saxena deals with the absence of positive correlates between etiology of Juvenile delinquency and modes of treatment in the country. As Juvenile delinquency is increasing due to rapid industrialization and urbanization, there is an urgent need to develop positive correlates between etiology of Juvenile delinquency and modes of treatment.

Hope that our esteemed readers would be benefited by these articles, and contribute their parts in the service of nation with more fervor and zeal.



(P.N.KHURANA)
EDITOR

Promoting Good Practices and Standards

Abstracts & Key Words

Bioterrorism : Bioweapons and our biodefence preparedness

Dr. Sudhir Kumar Misra, IPS

Key Words :

Bioterrorism, Bioweapons, Bioattack, Biological agents/ bioagents, Pathogens, Weapons of Mass Destruction, Biotechnology, Genetic engineering, Aerosol, Anthrax, Smallpox, Tularemia, Botulinum toxin, Plague, Ebolapox, Bioweapons programme, Biodisaster, Biodefence preparedness, Law enforcement agencies, First responders, Genetically modified organisms, Environment Protection Act, 1986, Prophylaxis, Quarantine, epidemiological tools, Post attack scenario, Public health authorities, Integrated disease surveillance project, Centres for disease control and prevention, UN security council resolution 1540.

Abstract :

Biological terrorism or bioterrorism poses an emerging threat in the security horizon of the Country. It, therefore, becomes imperative to know the present day biological weapons (bioweapons), their categorization, characteristics & effects. A comparison of the bioweapons with the conventional weapons would provide a better insight to the functioning of the bioweapons. The use of genetic engineering and biotechnology has given a fillip to the production of newer and lethal bioweapons. Anthrax, small-pox, plague, botulinum toxin, tularemia and haemorrhagic fever viruses are the important bioagents which could be weaponized. The role of law enforcement agencies and public health authorities, their proactive coordination and surveillance vis-à-vis biodefence preparedness at the State and National level would require a deeper introspection in order to prevent or combat a high-intensity biodisaster. The present day Laws and the Regulatory framework and related infrastructure in India would further need to be strengthened to deal effectively with any bioevent.

Emotional Intelligence at work place

Dr. Om Raj Singh

Key Words :

Empathetic, Negotiate, Predicting, Emotions, Motivating, Self motivation, Self awareness, Insensitive, Stabilizes, Empathy, Effectiveness, Anxiety, Complexity, Self regulation, Component, Interaction, Communication, Outstanding.

Abstract :

Emotional Intelligence (E.I.) increases with age. It can be learned, cultivated and increased in adulthood and that the place to learn it is not the workplace but school. For instance, children, who have trouble being accepted by their classmates are five times more likely to drop out. Aggressiveness has been linked to inability to handle pleasant scenes at home. At present, emotional education of children is being left to chance. Academic intelligence has little to do with emotional life. Based on rationality, school pays little or no attention to emotions lest they disrupt the class. Intelligence Quotient is a measure of one's intelligence quotient, while E.I. is a measure of one's emotional quotient. It describes the qualities of a person. Those who are insensitive to emotions in others will not see the need to care for others.

Nanotechnology in law enforcement & crime investigation

Johny T. Abraham, S. K. Shukla & A. K. Singh

Keywords :

Nanotechnology, Nanometer, Law enforcement, Crime investigation, Nanoforensics.

Abstract :

A scientific and technical revolution has begun that is based upon the ability to systematically organize and manipulate matter on the nanometer length scale. Science and technology research in nanotechnology promises breakthrough in areas such as materials and manufacturing, electronics, medicine and health care, energy, biotechnology, information technology and National security. The new concepts of nanotechnology are so broad and pervasive that they will influence every area of technology and every walk of human life. A brief outline of this new emerging technology, its social and ethical implications, its benefits to Law Enforcement Agencies and Forensic Scientists are discussed in this article.

Use of 'live fingerprint scanner' for distinguishing illegal immigrants

S. P. Singh, Swapnil Kishore

Key Words :

Fingerprints, Illegal immigration, Live Fingerprint Scanning, Database, Personal Identification Number (PIN).

Abstract :

India has suffered, for the past nearly two decades from terrorism in Punjab, Jammu and Kashmir and in Northeastern parts of Country. Countless innocent lives have been lost to the terrorist's bombs and guns. However, successive Governments have remained tied to a narrow conception of border security, which envisages no more than the establishment of static border posts, regular patrols, ambushes, etc. Pentagon has opined that Islamic fundamentalist groups after Sept. 9/11, terrorist attacks 'respect no borders, no boundaries and no state institutions'. The Bangladesh border is the longest land border that India shares with any of its neighbours. It covers a length of 4,095 kilometers abutting the States of West Bengal, Assam, Meghalaya, Mizoram and Tripura. Continued illegal migration from Bangladesh has completely changed the demography of the borders in South Bengal. There are more than 100 villages located right on the zero line. Intelligence reports have been emphasizing that unauthorized immigration from across the border in Northeastern peripheral villages needs to be checked for controlling escalation in terrorist attacks. A foolproof tool to differentiate between bonafide residents and illegal immigrants is the need of the hour. Use of live fingerprint scanning can be applied as an authentic and most reliable scientific technique for individualization. Even prints of monozygotic twins are different, a fact which cannot be established even by DNA Profiling.

Forensic identification of the deadbody of a foreign national - a case report

J.R. Gaur, Narbir Singh Thakur, V.K. Mishra

Keywords :

Margot Lydia, Lahaul and Spiti, Kangla Jot Glacier, Maxilla, Mandibular, Dental restorations, Radiographic.

Abstract :

A female Swedish national Ms. Margot Lydia Alluki Ryyanen travelled to India along with her boyfriend on tourist visa. They entered India from Pakistan through Wagah border on 4th April 1981 and reached Amritsar, in Punjab. From Amritsar these two tourists travelled to Himachal Pradesh and visited Kullu and Manali area. Both these tourists went to Kangla Jot Glacier for trekking in District Lahaul and Spiti from Manali.They went missing since 1981 from the glacier. Margot Lydia Allukki Ryynanen was reported missing by her mother in Stockholm in February 1982.

The deadbody of one female was spotted at the glacier in September. 2004. It was extricated by the Lahul and Spiti Police with the help of experts and was brought to Indira Gandhi Medical College, Shimla for post mortem examination and identification. The deadbody of the female was examined by the forensic

experts from medical college and State Forensic Science Laboratory, H.P. and then was sent to H.P. Govt. Dental College and Hospital Shimla on 18-09-04 for Dental Identification to make it more reliable, because the only record available was her dental data. The last dental treatment was done in the year 1973. No information was available about treatment after the year 1974.

It was only after matching the dental records with the corpse of Swedish women, whose body was bought from Kangla Jot Glacier to Shimla doctors confirmed that the body was of the Swedish national.

Forensic support system in the investigation of narcotic drugs & psychotropic substances

B. R. Rawat

Key Words :

Narcotic drugs & Psychotropic substances, Characterization, Impurity profiling, Forensic Support, Investigation.

Abstract :

Drug characterization studies can provide information useful for drug law enforcement authorities in investigating the cases pertaining to Narcotic Drugs & Psychotropic Substances. Chemical links between samples can be established and material from different seizures can be classified into groups of related sample. Most useful for law enforcement authorities, specific links between suppliers and users can be established, drug distribution patterns/networks can be built up, and the source, including the geographic origin of drug samples may be identified. The exact purpose of any comparative study determines the analytical approach. The Forensic chemist has to take care in interpreting the results, taking into account peculiarities of different drug types and the implications of the presence or absence of different types of impurities, namely manufacturing impurities and cutting agents. Close cooperation between laboratory and law enforcement personnel is essential to maximize the operational value of drug characterization studies for law enforcement investigation work.

Emotional problems among central reserve police force personnel : An analytical study

Rakesh Kumar Singh

Keywords :

Enotional problems, Emotions, Expresions, Behavioral impact, Internal security scenario, Stress, Psychological perversions, Health, Anxiety.

Abstract :

Emotional problems are multifaceted processes that occur as a reaction to events or situations in our personal as well as professional environment, which keeps changing from time to time. It arises out of the demands made upon the adaptive capacities of the mind and body as well as the bevioural pattern of the people around the person, and thus inevitable in this age of intense competition, increased expectations and several other socio-economic activators. For Law enforcement organizations like CRPF, paradoxically these are intrinsic to the job. Nevertheless, personal needs are sensitive enough to perform their duties without being under its influence or impact.

The expectations of employees in the organization continuously changes and prevalent socio-economic structures have substantial impact on it. Organizations are expected to be aware of the causative factors of emotional distress, since it has a detrimental effect on the overall efficiency. Such studies have never been carried out to assess its cumulative effects on the effectiveness of the Security Forces.

Child trafficking – a human right abuse*

Dr. Deepti Shrivastava

Keywords :

Child, Trafficking, Human Rights, Child prostitution, Sex workers, Practice of Devadasi.

Abstract :

The nation's children are an extremely significant asset. Their look after and concern are our accountability. Children's programme should find outstanding element in our countrywide strategy for the growth of human resources. Thus our children are nurtured up to turn into full-bodied resident, bodily fit, psychologically alert and morally healthy, gifted with the talent and inspirations endowed with society. Equivalent prospects for progress to all children throughout the phase of development should be our aim, for this would serve our larger purpose of reducing dissimilarity and bringing social justice.

The Constitution of India, the National Policy for Children, many other policies and legislations accord priority to children's needs. The Government of India ratified the Convention on the Rights of the Child on 2nd December, 1992. Accordingly, the Government is taking action to review the National and State legislation and bring it in line with the provisions of the Convention.

Court monitoring system

Umesh Sharaf, IPS

Keywords :

Abstract :

The classical system of representing the police during criminal trials is to have court constables representing the police station in the court of law. The court duty police personnel have monopoly over the court work and the system is prone to abuse. Because of territorial and functional distribution of work in different courts, it is also required for each police station to have several persons on court duty. Therefore, a paradigm shift is required to improve the performance of police in the courts. Poor conviction rate has been a long standing concern. A new system was introduced in Vijayawada City Commissionerate of Andhra Pradesh in January 2005 which has more than doubled the conviction rate and also helped improve process service.

A study of the absence of positive correlates between etiology of juvenile delinquency and modes of treatment to juvenile delinquents in india

Prof. D.P. Saxena

Key Words

Etiology, Juvenile Delinquency, Positive Correlates, Mode of Treatment, Juvenile Delinquent.

Abstract :

As per Children Act, the police officer informs the name, home address and other details about the delinquent child immediately to the Probation Officer. The Probation officer conducts an indepth observation and diagnosis through social investigation (social, psychological, economic and cultural background of the delinquent child). He prepares a comprehensive report comprising of all possible causal factors as well as his recommendations for a suitable mode of treatment. The other juvenile officers like Remand/Observation Homes Supdt. also carry out close observation and diagnosis of the juvenile delinquent. All furnish, before the juvenile court magistrate, their own prognosis, diagnosis, as well as recommendation for a suitable mode of treatment. Now, the juvenile court magistrate faces the problem of non-availability of positive correlates between etiology and modes of successful treatment, as he is left with no option but to exercise his discretion in awarding the committal of the delinquent child to a suitable mode of treatment, which may or may not prove effective'.

BIOTERRORISM : BIOWEAPONS AND OUR BIODEFENCE PREPAREDNESS

Dr. Sudhir Kumar Misra, IPS*

Whenever an illness of unknown origin appears at a place and disrupts the local populace, a question that strikes the experts is, whether the infection and the disease spread (a bioevent) was a result of deliberate human action or not. In more technical terms, was the event a result of a bioattack caused by bioterrorists? An understanding of the definition of bioterrorism thus becomes essential at this juncture. Bioterrorism can be defined as the use of biological agents (bioweapons) such as disease causing microorganisms (pathogens), and biological toxins (poisons) by individuals / organisations / States to cause harm to the target human populations, animals and plants for furthering their ideological, political or economic aims. As is evident, this definition not only covers the human beings as targets but also the use of bioagents by terrorists or criminals to wage economic warfare by destroying animals and / or plant population important to human kind.

I. Bioweapons

Biological weapons can be any infectious micro organism (bioagent) such as bacteria, virus, rickettsia when used intentionally to inflict harm upon others. This definition is often expanded to include biologically derived toxins and poisons. The bioagents have to be weaponized by converting them to a more stabilized form for effective usage as a bioweapon. Some of these agents are highly lethal; others however serve mainly in an incapacitating role. A bioweapon makes no distinction between soldier and civilian, rich and poor, ordinary people or national leader. All are equally vulnerable to the bioagents.

(i) Cold war and aftermath

In the cold war period both the USA and the Soviet Union tested bacteria, viruses and toxins as bioweapons. They used sophisticated means to disperse these agents in aerosols, to package them in bombs, and launch them in missiles. Intelligence sources estimate that some countries worldwide still have a bioweapons program. With the disintegration of the Soviet Union, a substantial number of scientists working for bioweapons programme migrated to

Key Words :

Bioterrorism,

Bioweapons,

Bioattack,

Biological agents/ bioagents,

Pathogens,

Weapons of Mass Destruction,

Biotechnology,

Genetic engineering,

Aerosol,

Anthrax,

Smallpox,

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Tularemia,

Botulinum toxin,

Plague, Ebolapox,

Bioweapons programme,

Biodisaster,

Biodefence preparedness,

Law enforcement agencies,

First responders,

Genetically modified organisms,

Environment Protection Act, 1986,

Prophylaxis,

other countries seeking employment. No one knows what bioweapon they might have taken with them. Some states and religious cults may well have access to it. In 1984, followers of Bhagwan Rajneesh in rural Oregon, USA, sprinkled Salmonella in salad bars throughout the county to prevent people from voting in an election. The attempt was successful and more than 7,500 people suffered from food poisoning, 45 of which were hospitalized. Between 1993-95 attempts were made several times by the religious cult Aum Shinrikyo to spray botulinum toxin and anthrax spores in the down town of Tokyo. Lastly, a few days after 11th Sept, 2001, in USA, 17 people were infected with anthrax spores in an anthrax laced letter attack resulting in 4 deaths.

(ii) Bioweapons vis-à-vis Conventional weapons

In the modern day scenario, when there is a lot of speculation on the use the Weapons of Mass Destruction (WMD) by terrorists, the importance of the bioweapons as an integral part of the aforementioned weapon group has to be acknowledged. A stream of thought suggests that the conventional weapons like nuclear bombs and missiles may become outdated and could be replaced by bioweapons, which are in a better position to perpetuate a long-term conflict and utilize far less resources. The question of the use of a nuclear bomb pits the mankind against its own survival and hence, its usage is intrinsically not desirable. As per a rough estimate, it is over ten times easier to construct a highly contagious virus than it is to enrich uranium. It is also estimated that it is several times easier for a terrorist to deliver a highly contagious virus than a nuclear bomb.

The comparison between a conventional weapon and a bioweapon can be further narrowed, if the available technology, access to resources, transportation and delivery methods and the effects produced by these weapons are studied. It is known that the conventional weapons, though used widely, are expensive and technologically difficult to produce by countries without the technical know-how. An effective quantity of bioweapons can however, be easily produced with limited capabilities and equipments. In fact, a lot of information in this regard is available on the Internet. It is roughly estimated that the number of people with technical knowledge in microbiology and genetic engineering are much more than nuclear technology and missile technology taken together.

Apart from the nuclear weapons and biological weapons, the chemical agents/weapons form the

third component of the WMD triumvirate. It is indubitable that some of the chemical weapons are highly poisonous. Although these weapons produce immediate effect, within a period of time the intensity peters down and the results become less lethal as the chemicals are dispersed and get diluted. Moreover, the consequences of a chemical attack are palpable immediately after an attack, allowing public health officials to act and decontaminate the area quickly. However a biological weapon attack might not be apparent weeks even after the initial attack. In the mean time a lot of valuable time would have been lost and the infection could have spread to thousands, killing at random.

(iii) Characteristics of Bioagents and their effects

A biological agent can be easily smuggled/transported because it is small and nonmetallic. This small amount of material can then be used as a stock to make a large number of bombs/other weapons. Unlike any other weapon, biological weapons are live and know how to replicate. They can make copies of themselves inside its host, be it a human being, an animal or a plant. A bioweapon can copy itself endlessly in people, whereas a conventional weapon can not make copies of themselves. From its point of release, a bioagent can affect humans in an explosive chain of lethal infection. These reasons could enhance the popularity of the bioweapon in strategic terms.

Theoretically speaking, any pathogen (disease causing microorganism) can be used as a bioweapon. Nonetheless, all the biological agents selected for use as bioweapons share certain improtant features. The agent should be highly lethal and easily produced in large quantities. Stability in aerosol form and dispersal capability is also necessary. Additional attributes that make an agent even more dangerous include its capability of being communicable from person to person and having no treatment or protection (vaccine). When the potential agents are reviewed for these characteristics, anthrax and smallpox emerge as the two bioagents with greatest potential for mass casualties and civil disruption. This is so because of the following reasons: (1) Anthrax and smallpox are both highly lethal, (2) both are stable for transmission in aerosol, (3) both have been developed as agents, (4) use of either agent would have a devastating psychological effect on the target population, (5) initial recognition of both diseases is likely to be delayed, and (6) availability of vaccines for either disease is limited. Anthrax is not contagious meaning thereby that people do not spread it from one to another. However,

Quarantine,

epidemiological tools,

Post attack scenario,

Public health authorities,

Integrated disease surveillance project,

Centres for disease control and prevention,

UN security council resolution 1540.

Abstract :

Biological terrorism or bioterrorism poses an emerging threat in the security horizon of the Country. It therefore becomes imperative to know the present day biological weapons (bioweapons), their categorization, characteristics & effects. A comparison of the bioweapons with the conventional weapons would provide a better insight to the functioning

small- pox is contagious. It spreads rapidly, causing death and disruption on a large scale, if not contained immediately.

Bioagents, in order to be effective as bioweapons, have to be converted into a powder, formed of tiny particles. These particles have a tendency to stay apart from one another and are designed to lodge in the human lungs. As these particles disperse as an aerosol, they become invisible to the human eye, normally within five seconds, after the release. Thus, a bioweapon after its deployment can not be smelled or known until it displays its effect on the target population. The bioweapon particles are remarkably small in diameter. This tiny size allows the particles to be sucked into the lungs, from where it enters the blood stream and begin to multiply.

The scientists who have researched on bioagents have realized that the bioagent has a decay time, which reflects its survival under unfavourable conditions. The decay time of anthrax is relatively long as it has a tough spore and therefore, can survive for a longer period. In comparison, another bioagent, tularemia has a decay time of only a few minutes in sunlight. Therefore, tularemia would be more effective when released at night. Conditions such as heat, heavy rain, snow, wind currents and humidity hamper the effectiveness of the bioagents. Botulinum toxin, which is a deadly poison, is readily inactivated by heat.

The effectiveness of some of the biological agents could be studied by verifying the dosage which can affect a person. A few thousand spores of anthrax can cause disease to a person. On the other hand, only a few hundred plague bacteria can infect a person. Smallpox requires a much lesser number. Amongst toxins, botulinum is the most poisonous substance known so far. One gram of crystalline toxin, evenly dispersed and inhaled, would kill one million people.

(iv) Categorization of Bioweapons

The CDC (Centers for Disease Control and Prevention, Atlanta, USA) defines three categories (A, B and C) of biological agents with potential to be used as weapons. This classification is based on the ease of dissemination or transmission, potential for major public health impact (e.g. high mortality), potential for public panic and social disruption, and requirements for public health. Category A bioweapons can be easily disseminated or transmitted from person to person, cause high rate of mortality, could cause public panic, and require special attention and public awareness. The agents in

this category include anthrax, plague, small pox, botulinum, tularemia, and haemorrhagic fever viruses.

The Category B bioagents are moderately easy to disseminate, cause moderate rate of mortality and lower morbidity and require enhanced disease surveillance. The agents not included in category A come under this category.

Category C agents are pathogens emerging in nature. However their categorization is based on availability, ease of production and dissemination, and potential for high mortality and morbidity. Examples of this category are Nipah and Hanta viruses, or any new genetically modified organisms suitable as a bioweapon.

(v) Anthrax and other bioagents :

A majority of the experts in the field of Bioterrorism are of the opinion that mass production of a lethal bioweapon, especially anthrax aerosol, is beyond the capacity of individuals or groups without access to advanced technology. Research on anthrax as a biological weapon began in the twentieth century. In humans, 3 types of anthrax infection occur : inhalational, cutaneous and gastrointestinal. The first most likely evidence of a clandestine release of anthrax as a bioweapon would be patients seeking medical treatment for symptoms of inhalation anthrax. As pointed out earlier, anthrax is not contagious meaning thereby that people do not spread it from one to another. However, small pox, the other deadly bioagent is contagious and spreads rapidly, causing death and disruption on a large scale.

Plague, also known as Black Death, occurs in 3 forms - bubonic, septicemic and pneumonic. Bubonic form is most common , following by septicemic and pneumonic forms of plague. Latest reports surmise a possible emergence of a new bioweapon virus called Ebolapox virus (black pox). This virus is suspected to be a genetic recombination of small pox and Ebola virus. It is supposed to be much hardier than Ebola, more like small pox, with much more resistance to sunlight, heat, cold, drying and humidity. Like small pox, it could lie dormant for weeks in the air.

The use of influenza virus as a bioweapon is another probability. It is suspected that after obtaining the knowledge of the genetic structure of the virus, the information could be used for destructive purposes by terrorists. To be more lucid, the information could be used to create even more dangerous strains. The recent outbreaks of avian influenza infecting thousands of people and

of the bioweapons. The use of genetic engineering and biotechnology has given a fillip to the production of newer and lethal bioweapons. Anthrax, small-pox, plague, botulinum toxin, tularemia and haemorrhagic fever viruses are the important bioagents which could be weaponized. The role of law enforcement agencies and public health authorities, their proactive coordination and surveillance vis-à-vis

biodefence preparedness at the State and National level would require a deeper introspection in order to prevent or combat a high-intensity biodisaster. The present day, Laws and the regulatory framework and related infrastructure in India would further need to be strengthened, to deal effectively with any bioevent

killing 38 of them validate the prospect that this organism could be used as a bioweapon. Doubts have been raised in certain corners that the deadly SARS pandemic, which took several lives worldwide originated as a bioweapon. A Chinese newspaper Wen Wei Po claimed that it originated as a bioweapon in a research laboratory.

(vi) Scientific advances and impact on bioweapons:

Biotechnology and the advances in genetic engineering have widened the scope of production of deadly bioweapons. Normal disease causing organisms (pathogens) can be genetically engineered for use as a bioweapon with a precise intent. These agents could be designed to defeat conventional methods of treatment and vaccination or to attack specific ethnic groups. Biological weapons could be immensely vicious and can cause widespread destruction if not timely controlled. In a conducive environment, unlike Nuclear bombs or missiles, they can multiply, self perpetuate or even change themselves for survival.

A recent view projected by some in the scientific community relates to the probability of construction of a Race sensitive bioweapon. This means that the pathogen could be designed to selectively attack people according to their genetic structure. The bioweapon would thus be capable of targeting a specific ethnic population. The knowledge gained by mapping the human genome could turn this probability into a reality. This type of genocidal bomb would be capable of killing only those people whose genetic makeup has DNA sequences that code for certain sequences and leaving others untouched. The present day advanced techniques to identify DNA sequences contained only in the target population and absent in attackers can allow the production and deployment of a safe bioweapon which needs no safety gears for the attackers or decontamination after operation.

There have been accidental discoveries at times by scientists, which may assist in the development of bioweapons. The increased disease causing capability of a virus (mouse pox virus) genetically altered to reduce rodent infestations in Australia has raised alarm over whether such research could be hijacked to produce biological weapons. The scientists themselves have sounded this alarm. Despite their warning, it is not clear whether the unexpected result, which turned a vector into a potent killer, could be duplicated in viruses that affect humans. But

scientists observe that it should serve as a warning to the community, to be more aware of the potentially harmful consequences of their work.

II. Our Biodefence preparedness

The report of the High Profile Committee on Disaster Management, published in the year 2001 in India, has pointed out a serious lack of public health infrastructure in India to deal with a biodisaster. In order to deal with the diagnosis of lethal bioagents effectively and safely, the requirements would constitute modern diagnostic equipments, anti microbial agents, trained professionals and High Containment Laboratory facilities having biosafety level 3 & 4. A strong infrastructure is, therefore, the need of the hour.

The role of Law Enforcement Agencies, especially Police Department as first responders to combat Bioweapons and Bioterrorism is of paramount importance. The two major areas of concern would be to prevent a bioattack and also to tackle the post attack scenario. The issue on prevention in terms of how to reduce the access of criminal elements to the biological agents and the relevant technology requires a serious thought. The Police and other law enforcement agencies would have to set up a coordination mechanism with the public health authorities in order to deploy the preventive measures. There may further be a need to set up a surveillance mechanism on all such institutions/ labs, which are closely related or are dealing with such bioagents.

(i) Laws and the Regulatory framework

The *Environment Protection Act, 1986* and the *Rules for the manufacture, use, import, export and storage of hazardous microorganisms, genetically engineered organisms or cells (1989)* have stipulated that there shall be a State Biotechnology Coordination Committee in the States wherever necessary. It shall have powers to inspect, investigate and take punitive action in case of violations of statutory provisions through the Nodal Department and the State Pollution Control Board/Directorate of Health/Medical Services. The Committee shall review periodically the safety and control measures in the various industries/institutions handling genetically engineered organisms/hazardous microorganisms.

Further, the Rules speak that there shall be a District Level Biotechnology Committee (DLC) in the Districts wherever necessary under the District Collectors, to monitor the safety regulations in installations engaged in the use of genetically modified organisms/hazardous microorganisms and its applications in the environment. The District Level Committee/or any other person/s authorised in this behalf shall visit the installation engaged in activity involving genetically engineered organisms, hazardous microorganisms, formulate information chart, find out hazards and risks associated with each of these installations and coordinate activities with a view to meeting any emergency. They shall also prepare an off-site emergency plan. The District Level Committee shall regularly submit its report to the State Biotechnology Co-ordination Committee/Genetic Engineering Approval Committee.

The Indian biosafety regulatory framework, comprising the 1989 Rules and the 1990, 1994 and 1998 DBT guidelines, covers the entire spectrum of activities relating to genetically modified organisms/ hazardous microorganisms. The 1990 'Recombinant DNA Safety Guidelines' and 1994 'Revised Guidelines for Safety in Biotechnology' provide guidance on containment and safe laboratory practices for genetically modified organisms (GMOs) in the agricultural and pharmaceutical sectors [DBT 1990, 1994].

Apart from the aforementioned Rules and Guidelines, any legal framework of a Nation should provide for a specific law to prosecute the offenders, who engage in an intentional release of bioagents to cause physical and mental harm to its citizens. It is suggested that a comprehensive legislation prepared to deal with terrorism must contain specific penal provisions, covering the illegal possession/sale/ transport/ preparation of harmful bioagents, attempt to or intentional release of such bioagents for causing mass casualties or disruption. Although Indian Penal Code, Criminal Procedure Code and other Criminal Acts may be put into use for prevention or investigation of a crime involving bioagents, it would be more expedient and advantageous, if a specific criminal legislation dealing with crimes involving bioagents or involving chemical or nuclear weapons is enacted.

(ii) Proactive coordination and surveillance

With the aforementioned vast array of Rules and Regulations, it would not be easy for an individual to misuse biotechnology in our country to engineer harmful microorganisms. Nevertheless, the Department of Biotechnology, the Local Administration, Health Department and Police will have to ensure the implementation of Laws and Rules very stringently, in order to protect the masses from a deliberate release of harmful bioagents. The local public health authorities would have to work relentlessly on the lines of improving early diagnosis of the disease, provide prevention strategies including mass immunization/prophylaxis, provide mass care and also to provide respectful and safe disposal of the dead. It may be suggested here that Police should be made an integral part of all the proceedings relating to the latest developments in this field so that the Department is able to react positively at times of crisis. The intelligence agencies also need to pay adequate attention on collection of information related to import, export, manufacture, storage or sale of dangerous pathogens.

(iii) Post attack scenario

In a post attack situation, all such measures which are required to be taken during a bio-disaster would have to be put in place with highest urgency. This would include evacuation of affected persons, to deploy quarantine measures and to assess the risk by utilising various epidemiological tools. The Integrated Disease Surveillance Project may be restructured and strengthened by including pathogens, which may be used as bioterror agents in the list of diseases put under surveillance. The creation of the National Institute of Disaster Management and the National Emergency Response Force is an impetus in this direction to manage and mitigate disasters. Nonetheless, these agencies would need to pay adequate attention and remain prepared to tackle the man-made disasters such as a biodisaster.

In case of a bioattack, the Police/Investigating agencies would be required to investigate the incident in order to trace the origin of the attack and also to arrest and interrogate the perpetrators of such an attack. This would not only need specialised training for the Police Officers to know the specific investigation procedures, but also to build up a chain of evidence after such an attack to successfully prosecute the apprehended accused persons. It would also require a high degree of coordination between the Health Department and the Investigating agency.

(iv) International efforts

There are several International Organisations which have taken up research and surveillance to

prevent bioattacks. The Centres for Disease Control and prevention, Atlanta, USA is one such institution. The World Health Organisation (WHO), Interpol at Lyon, France, World Organisation for Animal Health (OIE), FAO and some NGOs are also working unremittingly in this direction. United Nations, in its efforts to control the menace, has come a long way from its initial convention of 1972 (Biological and Toxins Weapons Convention) to the UN Security Council Resolution 1540 wherein measures to curb Nuclear Chemical and Biological Weapons Proliferation have been prescribed.

III. Concluding remarks

There is always a probability that motivated individuals or terrorist groups or even inimical states may cause a bioattack in India, which would lead to a biodisaster resulting in a massive disruption and chaos. It is known that the technology and trained manpower are available for a highly motivated terrorist organization/ State to cause a bioattack. A complete review of the available indigenous resources, capabilities and legal requirements would surely enhance our present preparedness to deal with a bioattack and to neutralize it. Finally, it would require very focused and coordinated efforts on the part of India and the International community to keep this omnipresent threat of bioterrorism away for times to come.

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EMOTIONAL INTELLIGENCE AT WORK PLACE

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Key Words :

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The nature of human intellect has fascinated scholars for centuries. Over the last few decades, the study of intelligence has proved as one of the strongest claims of practical and applied psychology. The vicissitudes to intelligence have intrigued the learners of this phenomenon, particularly psychologists and educationists, and the most basic question, which abound and proliferate in theoretical and empirical literature is : what kind of intelligence? The consensus arrived over the years to describe the phenomenon expresses itself as a function of consequences that helps the individuals to adapt to the complex environment around its, it acts as a selecting agency, an efficacious instrument of survival. Such a philosophical stand reflected itself in the form of attempts at understanding the process of intelligence as a cognition and intellection. The initial years of conceptualization of intelligence led to an overemphasis on genetic or developmental approach to a psychological ontogenesis of the phenomenon. In other words, the psychometric approach to intelligence has become increasingly less popular, during the second half of the 20th century primarily because it has little, if anything, to say about mental processes, and also due to the realization of the fact that structures of intelligence are complex and tend to vary considerably across culture. Apart from this, researchers become increasingly dissatisfied with the fact that general intelligence as understood today correlated very poorly in predicting the life success and adaptation of the individual to his or her environment. The attention of the researchers in the field is now gathering around the concepts like wisdom, prudence, practical intelligence, social intelligence, emotional intelligence and spiritual intelligence.

To meet the varietal needs of contemporary society, education of youth should be changed from the World of school to the World of work and life. Now- a-days, education system, *per se*, does not give guaranteed success in life. Our experiences and experiments highlight that even the persons with high intellect cannot be always successful in life. A lot of people have been trying to fill the gap between the success and failure, either of which is caused by interaction of mind and heart. Studies on this issue are still going

on not only in developing countries like India but all over the world. Recently, psychologists John D. Mayer, Peter Salovey and Daniel Goleman have come with an answer by introducing the concept of Emotional Intelligence (EI).

Emotional intelligence refers to the ability of the individual to set a goal in life, work towards achieving it, negotiate it and feel empathetic towards a fellow being. It involves the ability to deal with feelings and the ability to communicate. In fact, the lack of these skills has far reaching impact, resulting in unhappiness and inability to form positive relationships. It guarantees a well-balanced personality. While intelligence is basically determined at birth, emotional intelligence is essentially learned. Recent findings have identified emotional intelligence as the single most important factor predicting success and happiness in life.

Until1980s there was no talk of emotional intelligence. In1989, John Mayer and Peter Salovey first coined the term, Emotional Intelligence to describe a person's ability to understand one's own emotions, the emotions of others and act appropriately. The term EI became popular in 1995 with the best selling book, *Emotional Intelligence : Why it can matter more than Intelligence Quotient* ? by Daniel Goleman, Doctorate in Psychology from Harvard University and science writer with New York Times. He followed it up with another title *Emotional Intelligence* in a work place. The emergence of the EI gave the explanation that the people with high IQ might not necessarily be successful and a theory that true intelligence is actually a combination of both EI and IQ. Emotional Intelligence refers to the capacity of recognizing our own feelings and those of others, for motivating ourselves and managing emotions well in ourselves and in our relationships (Daniel Goleman, 1998).

Does IQ differ from EI ?

According to Goleman, an individual's success at work to the tune of 80 per cent is dependent on EI and 20 per cent on the more commonly known Intelligence Quotient (IQ). IQ is a measure of one's intelligence level, while EI is a measure of one's emotional level. It describes the qualities of a person e.g. self motivation, self awareness, impulse control and empathy. It means being smart about one's emotions. It is different from IQ in that it can teach the children EI skills to give them a better chance to use their genetically given intellectual potential i.e. IQ. *Those who are insensitive to emotions in others will not see the need to care for others.*

Determination,

Stabilizes,

Empathy,

Effectiveness,

Anxiety,

Complexity,

Self-regulation,

Component,

Interaction,

Communication,

Outstanding.

Abstract

Emotional Intelligence (E.I.) increases with age. It can be learned, cultivated and increased in adulthood and that the place to learn it is not the workplace but in school. For instance, children, who have trouble being accepted by their classmates are five times more likely to drop out. Aggressiveness has been linked to inability to handle in unpleasant scenes at home. At

While intelligence is basically determined at birth, EI is an acquired trait. Emotional skill such as empathy can be taught and developed as children grow, and live out their lives. Emotions, therefore, may be the true measure of human being. Emotional intelligence has its roots in the concept of social intelligence, first coined, by EI. Thorndike in 1920. He defined social intelligence as the ability to understand and manage men and women, boys and girls to act wisely in human relations. According to Mayer and Salovey, Emotional Intelligence is "a type of social intelligence that involves the ability to monitor one's own and others emotions, to discriminate among them, and to use the information to guide one's thinking and actions". The difference between Intelligence Quotient and emotional intelligence can be described in the following way.

A high IQ is all about how quickly you can do puzzles, and how many words you know, but emotional intelligence is about feelings, and understanding the feelings of other people. For example, a high IQ might get a person high marks or grades in academics, but it will be more of their emotional intelligence which determines how happy he or she is and thereafter, how well he or she can get along with others on work and in life.

Emotional intelligence can change unlike IQ, which generally stabilises when a person is around 18 years of age. A person with a low EI score on empathy today can have a higher empathy score in the future – if that person recognises his limitations, changes his attitude, adopts a learning strategy and practices key listening and empathy skills. EI is in a way a pre-requisite of leadership. An analysis has shown that it plays an increasingly important role at the highest levels in a corporate structure, where differences in technical skills are of negligible importance. In other words, the higher the rank of a person considered to be a star performer, the more EI capabilities show up as the reason for his effectiveness.

Peter Salovey offers a framework for EI through the life, personal intelligence characteristics of self awareness or knowing one's own emotions, the ability to manage one's emotions and impulses, self motivation skills, empathy or the ability to sense how others are feeling and lastly, social skills or the ability to handle the emotions of other people.

Self awareness is the cornerstone of emotional intelligence. It reflects the ability of a person to be able to know the reason for his emotional response,

thus improving his chances of handling it in an appropriate manner. People incapable of soothing themselves have to constantly fight against feelings of distress, while those who excel, can bounce back more quickly from life setbacks. This is not an easy skill as emotions often appear in disguise as with a parent yelling at a child for running on to the road, anger borne out of anxiety. Yet, for all its complexity, self awareness is the most crucial skill, says Goleman, as it allows us to exercise self control. It also allows people to develop coping mechanisms during the period of intense emotional upsurge. For instance, going out for a brisk jog when one is feeling tense may be a trigger response in the body mind that is incompatible with the earlier feelings. Self awareness can also be identified during performance reviews. Persons with this quality know about their limitations and strengths and they often demonstrate a thirst for constructive criticism. However, people with a low degree of self awareness interpret the message that they need to improve as a threat or a sign of failure. Self aware people have more degree of self confidence and have a firm grasp of their capabilities. They know when to ask for help. The risks they take on the job are calculated. They will never ask for a challenge that they know they cannot handle.

Managing emotions or self regulations is that component of EI, which frees us from being prisoners of our own feelings. People engaged in such conversation feel emotional impulses just as every one else does, but they find ways to control them and even to channel them in useful ways. *Self regulation is very important for leadership qualities.* People, who are in control of their feelings and impulses, are reasonable and are able to create an environment of trust and fairness. In such an environment, politics and infighting are sharply reduced and productivity is high.

Motivating oneself or marshalling emotions is essential for self motivation and creativity. A singularly important factor for all effective leaders is motivation. Many people are motivated by external factors e.g. big compensation packages or the status that comes from the position one enjoys in an organisation. On the other hand, those with leadership potential are motivated by a deeply extended desire to achieve for the sake of achievement. People with high motivation remain optimistic even under unfavourable circumstances. In all such cases, it is said that self regulation combines with achievement motivation to overcome the frustration and depression that come after a setback or a failure.

present, emotional education of children is being left to chance. Academic intelligence has little to do with emotional life. Based on rationality, school pays little or no attention to emotions lest they disrupt the class. Intelligence Quotient is a measure of one's intelligence quotient, while E.I. is a measure of one's emotional quotient. It describes the qualities of a person. Those who are insensitive to emotions in others will not see the need to care for others.

Empathy is another important factor, which recognises emotions in others. People, who are empathic, are more attuned to the subtle social signals that indicate what others want. Empathy is defined as thoughtfully considering other's feelings along with related factors in the process of making intelligent decisions. It is particularly important today as a component of leadership for various reasons. The reasons include increasing use of teams, the rapid pace of globalisation and the ever growing need to retain talent. Team work is possible only in the environment of mutual understanding and trust for which empathy is the basic ingredient. In this age of globalisation, cross cultural dialogue can easily lead to misunderstandings. In such cases, empathy is an antidote. People, who have empathy, have a deep understanding of the importance of cultural and ethnic differences. Retention of talent has become very important, particularly in our age and times. Leaders have always needed empathy to develop and keep good people.

Social skill is another important component of emotional intelligence. The art of relationship is basically a skill in managing emotions of others. It involves social competence and specific skills, which help in this direction. People, who excel in these skills, do well in anything that depends on interaction with others. Socially skilled people tend to have a wide circle of acquaintances and they have knack for finding common ground with people of all kinds. Such people have a network in place when the time for action comes.

Emotional Intelligence increases with age, says Goleman. It can be learned, cultivated and increased in adulthood and the place to learn it is not the workplace but in school. For instance, children, who have trouble being accepted by their classmates, are five times more likely to drop out. Aggressiveness has been linked to inability to handle unpleasant scenes at home. At present, emotional education of children is being left to chance. Academic intelligence has little to do with emotional life. Based on rationality, school pays little or no attention to emotions lest they disrupt the class. Many of the natural abilities of children are not in handling complex mathematical calculations or memorising ancient history, but rather in perceiving and understanding inherent emotional situation.

Emotional intelligence probably overlaps, to some extent, the general intelligence. The emotionally intelligent person is skilled in four areas i.e. identifying emotions, using emotions, understanding and regulaing emotions.

According to Goleman (1995), emotional intelligence consists of five factors namely: Knowing one's emotions, Managing emotions, Motivating oneself, Recognising emotions in others and Handling relationships.

Importance of Emotional Intelligence

Emotional intelligence allows us to think more creatively and use our emotions to solve problems. Daniel Goleman believes that emotional intelligence appears to be an important set of psychological abilities that relates to life success. It is empathy and communication skills as well as social and leadership skills that will be central to your success in life and personal relationships.

Goleman further argues that men particularly need to develop emotional skills, and he gives many examples of men with high intelligence, who were not successful because they had problems with their people skills. He found from his research that people with high emotional intelligence generally have successful relationships with family, friends and fellow workers.

Emotional Competencies and Emotional Intelligence Inventory

For the first time, Daniel Goleman developed, in 1998, a framework of emotional competencies which determines the extent of emotional intelligence acquired by an individual. An emotional competence, according to him, is *a learned capacity based on emotional intelligence that results in understanding performance at work (1998).* This earlier framework consisted of five domains or dimensions such as self-awareness, self-regulation, self motivation, empathy of social awareness and social skills.

Based on extensive research, Goleman (1995, 1998) proposed the following five dimensions of Emotional Intelligences :

1. Self Awareness
2. Self Regulation/Management
3. Self Motivation
4. Social Awareness (Empathy)
5. Social Skills

There are described below in details.

SELF AWARENESS

(a) Emotional Self Awareness : Recognizing one's emotions and their effects.
(b) Accurate self assessment : Knowing one's strengths and limits.
(c) Self confidence : A strong sense of one's self worth and capability.

Broadly, these cover the following points :-

(i) I am able to identify my feelings.
(ii) I have learned a lot about my self through feeling and emotions.
(iii) I understand the reasons for my moods.
(iv) I am clearly able to see how my feelings impact upon my performance.
(v) My values and goals are very clear in my mind.
(vi) I am aware of my strength and weaknesses.
(vii) I frequently seek feedback on my behavior/ performance.
(viii) I have full confidence in myself and in my decisions.
(ix) I take initiative to meet people in social situations.
(x) When I contribute to group discussions, I believe my contributions are as valuable as those of others.
(xi) If I am convinced I will not hesitate to assert my position, even if it means becoming unpopular.
(xii) I am clear what I want from life.

SELF REGULATION/MANAGEMENT

(a) Self control : Keeping disruptive emotions and impulses in check.
(b) Trust worthiness : Maintaining standards of honesty and integrity.
(c) Conscientiousness : Taking responsibility for personal performance.
(d) Innovation: Fle'xible in accepting new ideas.
(e) Adaptability : Comfortable and Flexible in handling novel ideas and approaches.

Broadly, these cover the following points :-

(i) I can achieve what I want through determination.
(ii) I do not easily give up even if I received setbacks.
(iii) When I have a problem that creates undue tension, I try to relax and gain a feeling of tranquility so that I can re-evaluate things.
(iv) When I face a problem, I focus on what I can do to solve it.
(v) I can adjust very quickly to new challenges, problem and information.
(vi) I am sensitive to the development in the environment and capture the opportunity there.

(vii) I am able to anticipate changes and I plan in advance to encash the opportunities.
(viii) I am able to handle multiple demands and rapid changes.
(ix) I am quite flexible in my approach to life and problems.
(x) I can frequently anticipate solution to my problems.
(xi) When I am certain that approach to a problem does not work, I can quickly reorient my thinking.
(xii) I seek out fresh ideas from a wide variety of sources.

SELF MOTIVATION

(a) Achievement drive : Striving to improve or meet a standard of excellence.
(b) Initiative : Readiness to act on opportunities.
(c) Optimism : Persistence in pursuing goals despite obstacles and setbacks.

Broadly these cover the following points :-

(i) I constantly try to improve my performance.
(ii) I set challenging goals for myself and strive to achieve them.
(iii) I work hard for better future reward rather than accept a lesser reward now.
(iv) I constantly scan the environment to seize any new opportunity.
(v) I prefer to pro act.
(vi) I mobilize others through unusual enterprising effort.
(vii) I take initiative to start dialogue for a new adventure.
(viii) I prefer to be an ideal leader.
(ix) I believe in performance rather than just following the rules.
(x) I believe in the saying that where there is a will there is a way.
(xi) I start any activity with a firm determination to complete it.
(xii) Under pressure, I am confident I will find the way.

SOCIAL AWARENESS (EMPATHY)

(a) Understanding of others : Sensing other's feeling and perspectives and taking as active interest in their concerns
(b) Developing others : Sensing other's development needs and bolstering their abilities
(c) Service orientation : Anticipating recognizing and meeting persons need
(d) Empathy : Awareness of other's feelings, needs and concerns
(e) Organizational Awareness : Inspiring guiding and making individual and group to work

Broadly these cover the following points :-

(i) People do not have to tell me what they feel, I can sense it.
(ii) I can sense the pulse of others and state unspoken feelings.
(iii) I listen to the feelings of people while they are talking.
(iv) I can sense the feelings of people when I walk into a room.
(v) I anticipate people's need and try to satisfy them.
(vi) I try to understand and meet the expectations of people.
(vii) I seek information about people's need and then provide service accordingly.
(viii) I take initiative in talking to people in order to serve them better.
(ix) I am very comfortable in working with people of different background.
(x) I am able to identify who has real power in the group/organization.
(xi) I am able to relate well with people who matter in the organizational dynamics.
(xii) I am able to influence the opinion of import and people.

SOCIAL SKILLS

(a) Communication : Listening openly and sending convincing messages.

(b) Conflict management : Negotiating and resolving disagreements.

(c) Building bond : Initiating and nurturing instrumental relationship.

(d) Collaboration and cooperation : Working with others towards shared goals.

(e) Team Capabilities : Creating group synergy in pursuing collective goals.

Broadly these cover the following points :-

(i) I am able to convince people.
(ii) I present myself in such a way that people get impressed.
(iii) I keep my knowledge base updated and influence people through that.
(iv) I am able to perceive the needs of the hour and influence people through my initiative.
(v) I am a good communicator.
(vi) I am able to put across my messages effectively.
(vii) I use a variety of medium of communication to get the desired response.
(viii) I am able to arouse enthusiasm in people.
(ix) I emerge as a natural leader during unstructured situation.
(x) I recognize the need for change and work for removing the barriers.
(xi) I create such an atmosphere where people enthusiastically interact and participate in the team work.
(xii) I build team identity and promote commitment among team members.

According to Mayer and Salovey "To measure El, there are four branches i.e.,

- *Identifying emotions* – the ability to recognize how you and those around you are feeling.
- *Using Emotions* –the ability to generate emotions, and then to reason with these emotions.
- *Understanding emotions* – the ability to understand complex emotions and emotional chains, how emotions transit from one stage to another.
- *Managing emotions* – the ability which allows you to manage emotions in your self and in others.

In conclusion, we can say that IQ gets you hired but it is EI that gets you promoted. Those organizations, that grow their people with outstanding EI, will be successful in future. The future will belong to those who have excellent relationship skills. Human capital will then truly leverage performance through people, pride and profits. No doubt, the emotional intelligence will contribute much to a happy living of an individual and the community.

Check your Emotional Intelligence level

Psychologists hold that the success of the people, in most walks of life, depends much on the level of Emotional Intelligence, to the tune of 80 per cent as observed by analysts. The level of emotional intelligence can be assessed in sufficient measure by analysis of actual perceptions. Here are some statements which will help you measure your emotional intelligence quickly. You have to mark (A) if you agree and (D) if you disagree.

1. I work hard but since there is no planning, I am unable to complete the task in time. Therefore, I suffer from tension/become stressful.
2. I always have full faith in whatever I do.
3. When in anger, my language becomes indecent.
4. When I compare myself with others I feel gratitude towards God that I am an intelligent and able person.

5. When I face someone in angry mood I talk to them with cool mind .
6. I take the practical rather than theoretical decisions and get it done confidently.
7. I have been a successful person in my life; therefore, I always observe restraint.
8. Occasionally, I feel that I am the happiest person in the world.
9. I do not have any difficulty in developing relationship with the emotional persons.
10. I always have the feeling that the world is so beautiful and enjoyable.
11. I have full confidence in me. I can do any work in the world.
12. Whenever I have not met with success, it was due to lack of preparation as per the planning. I learn the lessons from my mistakes.
13. I am not worried about the reward. I do my work with least expectation.
14. Without any wish for return, I help needy persons.
15. Before developing intimacy with somebody, I study the person minutely.
16. I trust others because I feel that every body is a good person at the core.
17. I do not take others for granted.
18. I have full control on my emotions, and do not allow my emotions and sensitivity to interfere with relationship.
19. I am a giver rather than a taker.
20. I understand my emotions and sensitivity and do not face any difficulty to solve the problems.
21. I develop friendship with others too soon.
22. I am an action-oriented person irrespective of success or defeat.
23. I make it a point to congratulate others for their success.
24. I always feel that I do not achieve as much as I deserve. Therefore, I go on making efforts to forge ahead.
25. I am always confident that I can do it well.

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NANOTECHNOLOGY IN LAW ENFORCEMENT & CRIME INVESTIGATION

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Introduction

Nanotechnology promises to be an abundance of wonders – improving our healthcare, optimizing our use of resources, increasing our standard of living. The development of materials ten times stronger than steel but a tenth of the weight offers to make transportation safer, faster and more efficient. Nanomedicine - detecting disease at the atomic/molecular level will lead to new treatments for old diseases through improved pharmaceuticals, with features such as programmed delivery to desired targets like tumours. New nanotechnology based paints and coatings will prevent dirt and water from adhering to surfaces such as kitchen counters, vinyl sliding, cars and windows. Imagine a car you never have to wash, that rolls dirt and water right off; so you don not even have to use your windshield wipers. Other items on the magic list of nanotechnology [1] include :

- Cost effective and reliable filters for water de-contamination, de-salination, containment of industrial pollutants and air purification.
- More efficient solar energy conversions, thereby reducing current reliance on oil and offering an alternative to nuclear power for future electricity needs.
- Efficient fuel cells and hydrogen storage systems leading to non-polluting automobiles, trucks and buses.
- Nanoscale components in sensor system that can quickly detect and identify pollutants and disease organisms as well as chemical or biological warfare agents to allow quick and appropriate medical treatment or security responses.
- The light emitting semi-conductor nanoparticles, called the Quantum Dots that can bind the molecules in the body to help the doctor spot diseases.
- Nanometer scale traps able to remove pollutants from the environment and deactivate chemical warfare agents are another possibility.
- Computers with the capabilities of current workstations but of the size of a grain of sand and able to

operate for decades with the equivalent of a single wristwatch battery are not a distant dream.

Thus, nanotechnology actually represents a revolutionary super-field that will eventually become a foundation for the current research areas such as inks and dyes, protective coatings, medicines, electronics, energy storage and usage, structural materials, and many others that we cannot even anticipate. Many further and greater advances resulting from nanotechnology are inevitable. It is widely felt that nanotechnology will be the next industrial revolution.

What is a nanometer?

Nano, Greek for "dwarf", means one billionth. Measurement at this level is in nanometers (abbreviated as nm). A nanometer is one billionth of a meter (10^{-9} m). To put this into perspective, a diameter of a strand of human hair is roughly 75,000 nm. The smallest feature in an integrated circuit used today in computers is 250 nm. Proteins, the molecules that catalyze chemical transformations in cells are 1 to 20 nm in size and the width of a DNA molecule is about 2 nm [2,3].

Why is this length of scale so important?

The potential impact of nanotechnology stems directly from the spatial and temporal scales being considered. As particle size approaches molecular dimensions, all properties of materials change (for example, melting point, magnetization, charge capacity) making nanometer useful for particular application [4]. This occurs since the materials at the nanoscale lie between the quantum effects of atoms/ molecules and the bulk properties of materials. Further, nanoscale components have very high surface areas, making them ideal for use in composite materials, reacting systems, drug delivery, and energy storage. The finite size of material entities, as compared to the molecular scale, also determine, an increase of the relative importance of surface tension and local electromagnetic effects, making nanostructured materials harder and less brittle. The interaction wavelength scales of various external wave phenomena become comparable to the material entity size, making materials suitable for various opto-electronic applications. Thus, materials and devices engineered at the nanometer scales help the scientists and engineers in the manipulation of its physical and chemical properties, and ultimately design materials to give desired properties [3,5].

Is this really new?

In 1959, Sir Richard Feynman, in one of his memorial lectures in Physics, titled, "There's plenty of

Abstract

A scientific and technical revolution has begun that is based upon the ability to systematically organize and manipulate matter on the nanometer length scale. Science and technology research in nanotechnology promises breakthrough in areas such as materials and manufacturing, electronics, medicine and health care, energy, biotechnology,

information technology and National security. The new concepts of nanotechnology are so broad and pervasive that they will influence every area of technology and every walk of human life. A brief outline of this new emerging technology, its social and ethical implications, its benefits to Law Enforcement Agencies and Forensic Scientists are discussed in this article.

room at the bottom", presented a technology vision of extreme miniaturization. The entire transcript of this classic lecture by the Caltech Physicist is available at www.its.caltech.edu/`feynman/plenty.html. He talked about laws of physics, permitting atomic level manipulations of particulate matter using the ultimate tool box of nature, and building objects atom-by-atom or molecule-by-molecule. Since 1980s, the inventions and discoveries leading to the fabrication of nanoobjects have been a testament to his vision.

Though the material scientists and chemists have been working on nanotechnology from the 10th century, the real move towards the use of nanoparticles did not occur until the early 20th century, with the production of carbon black and subsequently fumed silica in the 1940s. The discovery of C_{60} in 1985 and carbon nanotubes in 1991 gave a real stimulus to the development of nanomaterials and made scientists ready to explore more avidly the use of these materials [5]. Cylinders of carbon atoms called Carbon Nanotubes have already been used in automobile parts and some top-of-the-range sports equipment such as tennis racket. In 2004, Swiss tennis player Roger Federer won Wimbeldon using a racket strengthened by carbon nanotubes (www.sciencemuseum.org/uk/antenna/nano). The fusion of information technology with material characterization techniques such as Atomic Force Microscopy (AFM) and Scanning Tunneling Microscopy (STM) along with new synthesis routes have provided the additional factors that have enabled nanomaterials to be designed for specific purposes. It is this ability to design and characterize materials at the nanoscale that distinguishes modern day nanotechnology from previous activities in materials science [3,5].

Top-down vs. Bottom-up approach

Nanotechnology has opened up a new world of possibility and hence, it has set off a proliferation of new technologies. The two fundamentally different approaches to nanotechnology are graphically termed as "top-down" and "bottom-up" [2,5,6].

A top-down approach is similar to a sculptor cutting away at a block of marble. The computer industry uses this approach when creating their microprocessors. This top-down approach to engineered building blocks becomes increasingly challenging as the dimensions of the target structures approach the nanoscale. Nature, on the other hand, designs objects from molecular level.

Nature organizes atoms and molecules into complex structures, relying on chemical methods with a remarkable degree of structural control that could support even life. For example, molecular ensembles present in plant such as chlorophyll are arranged within the cells on the nanometer to micrometer scales. These structures capture light energy and convert it into chemical energy that drives the biochemical machinery of plant cells [6]. Thus Nature, in contrast to the top-down physical methods, utilizes bottom-up chemical strategies to assemble small components to produce larger objects. It is this bottom-up approach of Nature, which is being mimicked by scientists and engineers to produce artificial molecules with nanoscale dimensions.

Social and ethical implications

Nanotechnology will have very broad application across all fields of science and engineering, and will offer greatly improved efficiency in almost every facet of life. But it has many risks as it will have many commercial uses. It will be an amplifier of the social effects of other technologies, and may result in the decline or complete destruction of an older industry. Many ethical issues of fairness will also arise within nanotechnology industries themselves like demand for appropriate safe guards for workers, engaged in hazardous production processes.

One of the major concerns is the potential health and environmental risks associated with nanomaterials. Currently, there is little information available concerning the risks. Materials can behave quite differently at the nanoscale compared to its bulk form. This is because the small size of the particles drastically increases surface area and thereby its reactive properties. Further, the quantum effect also starts to become significant at this scale of measurement. In such conditions, nanoparticles can produce toxic effects even if the bulk substance is non-poisonous [7]. For example, if these particles enter the body through inhalation, ingestion or absorption through the skin, they are able to move around and enter cells more easily than larger particles. This we can understand from the studies on the effect of exposure to mineral dusts like asbestos fibers. Long thin asbestos fibers (narrower than about 3 microns and longer than about 15 microns) were a particular cause for concern. They have aerodynamic properties that allow them to reach the gas-exchanger part of the lungs when inhaled, but are too long to be removed by the macrophages, the lung's scavengers. Once lodged deep in the lungs, they can inflame the tissue and may eventually lead to scarring and lung cancer [7]. On similar grounds, carbon nanotubes also could conceivably cause similar problems, if inhaled quantitatively as a single fiber. Untill detailed toxicological studies are undertaken, human exposure to airborne nanotubes in laboratories and work places should be minimized.

Another area of potential exposure to nanoparticles is the use of some cosmetics and sunscreen products. Fe_2O_3 nanoparticles are used as a base in some brands of lipsticks. Nanoparticulate TiO_2 and ZnO are already in use in certain sunscreens as they absorb and reflect UV radiation, but are also transparent on the skin. Normally, these nanoparticulates do not penetrate beyond the epidermis since these cosmetic products are intended for use on undamaged skin. But it will be a concern in the case of people having damaged skin due to severe sun burn or skin complaints like eczema [7]. In the longer term, the convergence of nanotechnology with other technologies is also expected to lead to far reaching developments, which may raise social and ethical issues. For example, the convergence of nanotechnology and IT may enable a network of remote sensing devices, bringing greater personal security, but also raising issues of privacy and covert surveillance [2].

How will it aid Law Enforcement Agencies?

As time progresses and nanotechnology develops, it will usher in a new era of security concepts and equip the security personnel with state-of-the-art gadgets and facilities. Smaller and faster computers, advances in memory storage, smaller and accurate Global Positioning Systems, batteries with longer life, data encryption using Quantum Cryptography will revolutionize the communication field, providing the security personnel with faster and safer communication network and gadgets. Booker and Boysen [2], in their book on nanotechnology have mentioned that utilizing the unique properties of quantum mechanics, quantum cryptography can provide unbreakable security for data transmission for business, government and military. Another application envisaged is in the construction of quantum computers capable of breaking current encryption technique (a needed advantage in the war against terror). Additionally, quantum computers provide better simulations to predict natural disasters and pattern recognition to make biometrics – identification based on personal features such as face recognition more accurate.

With development of super strong and lightweight materials, security personnel will be benefited with chemical, biological, and explosive proof vehicles for effective patrolling and to reach the affected sites safely and faster. With such composite materials, new range of firearms, ammunition and riot weapons will enhance the firepower of security personnel. Kevlar, the backbone fiber of bullet-proof vests will be replaced with materials that not only provide, better protection but all-weather-proof clothing. Advances in hardware and software will lead to improvements in the field of robotics, resulting in user-friendly robots (including robot dogs) assisting the security personnel in fire-fighting, rescuing people trapped under debris, disposing roadside bombs and providing access to dangerous zones [2,6].

Chemical sensors, another prime area being developed based on nanotechnology will be incredibly sensitive – capable of pinpointing a single molecule out of billions. These sensors will be cheap and disposable, forewarning airport-security breaches or anthrax-laced letters. These sensors will eventually take to the air on military Unmanned Aerial Vehicles (UAVs), not only sensing chemicals but also providing incredible photo resolutions for intelligence gathering and controlling road traffic. Imagine police UAVs patrolling the skies registering the movement of suspected vehicles and terrorists and beaming real time images of the pre and post-blast scenes helping the police to track the movement of suspects. These photos condensed on an energy efficient high resolution wrist- watch sized display will find their way to security personnel posted at various locations, to gather further information and draw near to cordon off the affected areas [2].

Nanotechnology also offers solutions to development of crime scene tools. One such area is in the development of fingerprint powders, which could provide finer details than the currently used powders. In the technology update section of New Scientist Magazine (www.NewScientist.com), it is explained that the new powders will not only be speckled with a fluorescent dye but also coated with hydrophobic molecules, which are repelled by water and attracted to the oily residue left by the fingertip. Due to this strong adhesion, the fingerprints become sharper providing finer details.

Whether the forensic scientist is ready to join the nano bandwagon?

In another decade time, a host of domestic and industrial products based on nanotechnology are going to hit the market and most of them will find their place in everyday usage. Forensic scientists visiting the future scene of crime will stumble upon these new products,

which will be the future clues to be picked up for the reconstruction of scene of crime or to link the suspect with the crime. Since these products will be mainly synthesized using the bottom-up approach, forensic analysis of these future clue materials has to invariably include the study of the characteristics of the nanoparticles forming the basic building blocks. The study could include topography or structural characteristics or even both. But Forensic Scientist need not wait for the emergence of new test and measuring equipment. They can also jump in to the nano bandwagon since a host of analytical equipment designed to study the nanoparticles are already available off the shelf or are in the final stage of realization. Some of the tools are already in use with forensic scientists. They include Ultraviolet-Visible Spectrophotometer (UV-Vis), Infrared Spectrophotometer (IR), Raman Spectrometer and Scanning Electron Microscope (SEM). The other tools, which exist but yet to find places in the heart of forensic scientist, include Atomic Force Microscopy (AFM), Transmission Electron Microscope (TEM) and Scanning Tunneling Microscope (STM). New tools like Magnetic Resonance Force Microscopy (MRFM) [2], which could be useful to forensic scientists, are still under development. Although a TEM can achieve much greater resolution than an SEM, the sample preparation is tedious and destructive which itself will be the retarding factor to a forensic scientist in using them. But other tools like AFM, STM may find an early entry into the forensic laboratories because of its sample versatility to analyze solid and liquid samples in ambient atmosphere without involving any destruction or tedious sample preparation.

Nanoparticle tagging will be another boon to forensic scientist in analyzing future nanoproducts. As a part of patency protection or to trace the source of controlled substances like explosives, these materials are likely to come with tagging using nanoparticles. Nanoparticles small enough to behave as quantum dots can be made to emit light at varying frequencies. When such quantum dots are attached to molecules and if one can spectroscopically determine its presence, the true owner of the material can be ascertained. Another approach is through using nanowires that have stripes on them similar to a bar code, and the stripes tagged with quantum dots emitting light at varying frequencies can generate a code similar to bar code.

Concluding remarks

Nanoscience offers great opportunities and the potential benefits of nanotechnology are innumerable. The total impact of nanotechnology on the society is expected to be greater than the combined influences that the biotechnology and information technology had on the society in this century. Nanotechnology will change the nature of almost every human-made object. The major question now is how soon these revolutions will arrive.

Scientists and technologists expect 2012 to be the time that significant revolutionary product based on nanotechnology will be available. The order of events are likely to be computers and medical first and then materials. But, not all the advances that nanotechnology is set to bring will happen overnight. Though there will be some implausible advancement, not everything that is imagined as an outcome of nanotechnology will come to reality. However, nanotechnology is sure to usher in things that could end up shaping a new world.

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USE OF 'LIVE FINGERPRINT SCANNER' FOR DISTINGUISHING ILLEGAL IMMIGRANTS

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Key Words :

Fingerprints,

Illegal immigration,

Live Fingerprint Scanning,

Database,

Personal Identification Number (PIN).

Introduction

Increase in number of terrorist attack has been causing huge loss of life and property to the Nation. There has been explosions, ambushes at security patrols, and attacks on paramilitary and army installations, blasts in trains, buses and crowded market places despite substantial presence of uniformed personnel all through the Nation. And when we talk of Jammu & Kashmir, and northeastern bordering States of India, the picture is highly volatile; percentage share of violent crimes to the total IPC crimes during 2002 was 24.[1]

The infiltration from across the border in peripheral villages/towns needs to be checked for controlling escalation in terrorist attacks on Indian soil. During peacetime, border security includes the tasks of prevention of trans-border crimes, smuggling, infiltration, illegal migration, illegal movement of hostiles, and so on. Transgressions along the border were, in the past, often localized in nature and had no major security implications. Since 1980s, however, with Pakistan's involvement in terrorist violesnce in India and the subsequent emergence of various countries abutting India's northeast as safe havens for insurgents operating in India, the pattern of border crimes has changed. These are no longer localized in nature, and the intricate relationship between narcotics smuggling, small arms proliferation and terrorist activities now have far reaching implications for internal security.[2]

A rapidly changing internal security environment suggests that border management is not simply a matter of policing along the border. There is a growing realization, now, that border management must broadly include a comprehensive package which involves defending the border in times of war, securing the borders in times of peace, ensuring that there are no unauthorized movements of humans, taking steps against

Abstract

India has suffered for the past nearly two decades from terrorism in Punjab, Jammu and Kashmir and in northeastern parts of India. Countless innocent lives have been lost to the terrorist's bombs and guns. However, successive Governments have remained tied to a narrow conception of border security, which envisages no more than the establishment of static border posts, regu-

smuggling of arms, explosives, narcotics and other kinds of contraband items, using sophisticated technological devices to supplement human efforts to these ends, coordinating intelligence inputs from various agencies and ensuring the socio-economic development of the border areas.[3]

The Bangladesh border is the longest land border that India shares with any of its neighbours. It covers a length of 4,095 kilometers abutting the States of West Bengal, Assam, Meghalaya, Mizoram and Tripura.[4]

The existing and emerging threats along this border are conditioned, to a large extent, by the terrain. The border, which was carved out by the Radcliff Line, was not demarcated on the ground. As a result, the border cuts through the middle of several villages and in some cases, while one section of a house is in one country, another is in the other. In West Bengal, for instance, there are more than 100 villages located right on the zero line, and in many villages there are houses where the front door is in India and the rear door opens into Bangladesh.[5]

The Census report of 1991 observed that when the average density of population in the

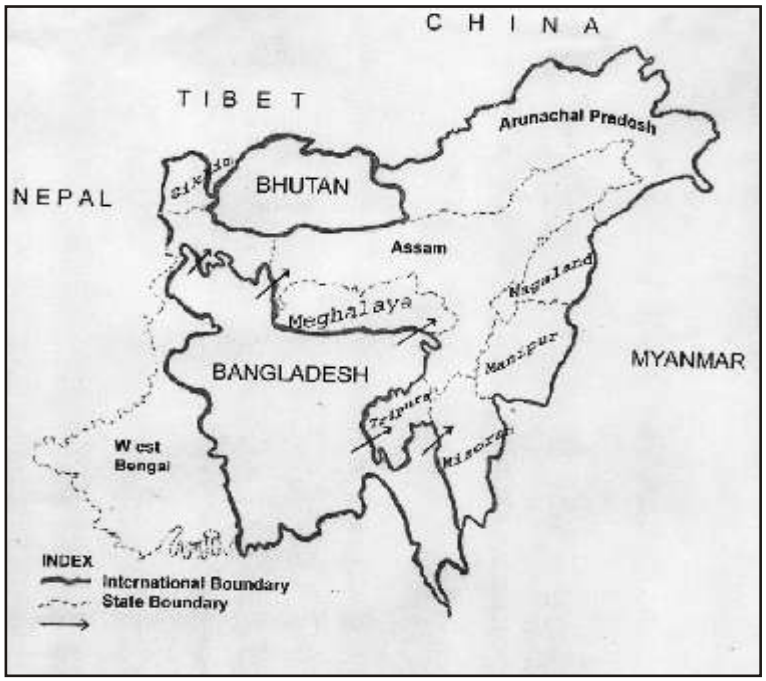

Fig. Map showing Indo-Bangladesh border. The arrows (→) indicates the entry points of illegal migrations to Indian States from across the border.

country rose by 51 persons per square kilometer over the 1981 level, West Bengal recorded a quantum increase at 151 persons per square kilometer.

In a status paper on illegal immigration filed in January 1999 in the Supreme Court in response to a petition, the Government of West Bengal admitted that 12,40,000 Bangladeshis who entered the State with travel documents had simply melted away into the local population, while another 5,70,000 had been pushed back into Bangladesh between 1972 and 1998. The document stated that, till 1997, the intercepted infiltrators were summarily pushed back, but after 1997 this practice was discontinued.[6]

Thus, according to Partha Ghosh, in some Districts, the Bangladeshis in their desperate bid to seek refuge in India have even hijacked the legal procedure of immigration.[7]

Measures being taken by the Government to check illegal Immigration:

The Government of India is deeply concerned about the deteriorating law and order situation in bordering areas. Apart from its emphasis in J&K, it is not taking any chances on the eastern front as well. The Border Security Force (BSF) is taking the responsibility of checking unauthorized entry into Indian Territory. The BSF is deployed all along the 4095.7 kilometers of borders that the States of West Bengal (2216.7 kilometers), Assam (262 kilometers), Meghalaya (443 kilometers), Tripura (856 kilometers) and Mizoram (318 kilometers) share with Bangladesh.[8]

At present, 37 battalions of the BSF man the border, and there are 714 BSF Border Outposts located along its length. The front wise average distance between Borders Outposts is as follows: [9]

- South Bengal : 5.2 kilometers
- North Bengal : 5.9 kilometers
- Assam, Meghalaya, Manipur and Nagaland : 5.1 kilometers
- Tripura, Cachar and Mizoram: 6.1 kilometers.

The Border Security Force (BSF) arrested 776 Bangladeshi infiltrators along the Assam-Meghalaya border in 2006 (till November), reports *Press Trust of India*. 754 were handed over to police and 22 to the Bangladesh Rifles (BDR). According to BSF sources, most of the 754 Bangladeshi nationals handed over to the police were deported to the neighboring country after talks during the BSF-BDR flag meetings.

lar patrols, ambushes, etc. Pentagon has opined that Islamic fundamentalist groups after Sept. 9/11, terrorist attacks 'respect no borders, no boundaries and no state institutions'. The Bangladesh border is the longest land border that India shares with any of its neighbours. It covers a length of 4,095 kilometers abutting the States of West Bengal, Assam, Meghalaya, Mizoram and Tripura. Continual illegal migration from

Bangladesh has completely changed the demography of the borders in South Bengal. There are more than 100 villages located right on the zero line. Intelligence reports have been emphasizing that unauthorized immigration from across the border in northeastern peripheral villages needs to be checked for controlling escalation in terrorist attacks. A foolproof tool to differentiate between bonafide residents and illegal immigrants is

The report added that smuggled goods worth over INR 8.5 crore, including forest produce valued at INR 2.4 crore, narcotics worth INR 70.9 lakh and cattle valued at INR 1.9 crore, were recovered from the Indo-Bangladesh border. The seizure included fake Indian currency worth INR 33,000, which were being pumped into the country through Bangladesh.

Border fencing

With a view to check and prevent cross border illigal migration, the Government of India ordered fencing of borders along the Indo-Bangladesh borders. Details of the fencing work done so far are given in Tables 1 and 2.

A foolproof tool/technique to differentiate between genuine residents and infiltrators or unauthorized immigrants is the need of the hour. Fingerprint has been most authentic and reliable science for individualization or personal identification for over more than one century. Even prints of monozygotic twins are different, a fact which cannot be established even by DNA Profiling.

Table 1 : Fencing work on Indo-Bangladesh Border (Phase-I)

Name of the State	Length of the border (in km.)	Sanctioned length of the fencing (in km.)	Work completed (in km.)	Expenditure incurred so far (Rs. in million)
West Bengal	2216.7	507	505	921.1
Tripura	856	-	-	-
Assam	262	152	149	192.9
Meghalaya	443	198	198	283.9
Mizoram	318	-	-	-

Table 2 : Fencing work on Indo-Bangladesh Border (Phase-II)

Name of the State	Length of the border (in km.)	Sanctioned length of the fencing (in km.)	Exstimated Expenditure far (Rs. in billion)	Expected year of completion
West Bengal	2216.7	1021	4.40	2006-07
Tripura	856	736	2.13	2006-07
Assam	262	71.5	0.25	2006-07
Meghalaya	443	201	0.58	2006-07
Mizoram	318	400*	1.11	2006-07

***Length is more due to topographical factors**

Rationale of the Study

India has suffered for the past more than two decades, from terrorism in Punjab, Jammu and Kashmir and in northeastern part of India. Countless innocent lives have been lost to the terrorist's ruthless violence.

The first step towards checking the menace of cross border terrorism would be to correctly identify and distinguish the miscreants from the local residents. There are many ways to do that, but their effectiveness is always questionable. Even DNA Analysis cannot be used as a foolproof technique to individualize. Live Fingerprint Scanning System can be used as an authentic and convenient means of recording and identifying fingerprints for the purpose of individualization. Database once created can be used for further reference. A 40 GB hard disk can store about ten thousand individual fingerprint images.

Objectives of the Study

The followings are the objectives of the present study:

1. To identify a foolproof, and convenient tool/technology for distinguishing illegal immigrants from the genuine or bonafide residents of the bordering villages/areas.
2. To create electronic Fingerprint Database for immediate comparison and identification.

Operational Definitions

Violent Crimes :[11] The following IPC crimes have been grouped as 'Violent Crimes' for the purpose of crime analysis in the study. These are:-

(a) *Violent crimes affecting life*: Murder, attempt to murder, culpable homicide not amounting to murder, dowery deaths, and kidnapping & abduction.

(b) *Violent Crimes affecting Property*: Dacoity, preparation and assembly for dacoity and robbery.

(c) *Violent Crimes affecting Public Safety*: Riots and arson.

(d) *Violent Crimes affecting Women.*

(e) *Fingerprint* : It is the impression of papillary ridges on finger.[12]

(f) *Illegal immigration*: Entry into the territory of a Nation.

(g) *Live Fingerprint Scanning, Database, Personal Identification Number (PIN).*

Methodology

A ten-digit fingerprint slip stocked in fingerprint bureaux in

the need of the hour. Use of live fingerprint scanning can be applied as an authentic and most reliable scientific technique for individualization. Even prints of monozygotic twins are different, a fact which cannot be established even by DNA Profiling.

different parts or States of India carry rolled and plain impressions with a unique Personal Identification Number (PIN) or classification formula. The present method of using fingerprint record slip database is a technique for the identification of individuals. These slips can be created either by using 'printer's ink' or by recording fingerprint impressions by a 'live scanner'.

The creation of fingerprint database for comparison and identification of residents of a bordering village/town can be of vital importance in solving the problem of illegal immigrants, who instigate violence and sponsor terrorism initially in bordering areas and then to other parts of India.

Fingerprint has been most authentic and reliable science for individualization or personal identification, for the last more than 100 years. Creation of fingerprint database for comparison and identification at P.S. level can be of vital importance in solving the problem of illegal immigrants.

Futuristic Technology For Checking Illegal Immigration

To control frequent incidents of illegal entry into India, through porous border, the Live Fingerprint Scanning Technology can be used. Live Fingerprint Scanner is a device which has the ability to enroll a live fingerprint of an individual or individuals. Live Fingerprint Scanning is a feature and a capability of the underlying biometric pattern analysis algorithm and much more desirable across scanners than simple scanner independence.

(i) Details of the Equipment [13]

Portable Live Fingerprint Workstation ('Live Scanner') is an opto-electric device, which consists of a Laptop, a small scanner, and a web camera (optional). Entire system can be carried to anywhere in a small office bag, and it also does not require electricity; it is operated by the inbuilt laptop battery.

It is very easy to make a highquality ten-print slip stably and fast. It is achieved by refusing from the traditional "ink" method of fingerprint taking but using up-to-date, effective technology of electronic non-ink fingerprinting.

Advantages over traditional inking method

- Troubling about purchasing service materials (printing ink, paper etc.)
- Troubling about training to take "ink" fingerprints skillfully.
- Charges for inevitable errors (smears and print distortion, rolling sequence and completeness errors.
- Then-and-there comparison and identification, does not require in-depth knowledge of fingerprint science by the user, only a few computer commands are to be remembered, moreover it does not require much of computer knowledge for the operator.

Technical Specifications of the Equipment

Roll Finger Scanner : (Opto-electronic Scanner)
Window size : 40 mm X 40 mm
Resolution : 512 Dpi
Image Mode : 256 Gray Scales
Scanning time : Less than 0.01 second/impression
Distortion : < 1%

Hardware Engine :
Intel Pentium-IV Architecture
40 GB Hard Drive
64 MB Video Memory
512 MB RDBMS RAM
Ethernet 3 Port

Flat Screen Active Matrix LCD Monitor 15.1 inch
High Resolution Digital Cam (Optional)

1. Power Requirements :

- 220 VAC (+/- 10%)
- 5 Amps, 50 Hz

2. Environmental Conditions :

- Operating Temperature : 0C-45C
- Humidity : 90 %, Non-Condensing, Condensing

3. Operating System :

- Microsoft Windows 2000/SP4

4. Scan Engine :

- IBioS-CJ VERSION .01 RELEAE 05

5. External Casing:

- Rugged Industrial Grade

6. Dimension of the Scanner:

- 177 X 150 mm

ii) Creation of Fingerprint Database using Live Scanner :

Live scanner can be carried to the village to create fingerprint database of the residents. It can store fingerprints on 10-digit format or it can store desired top phalange of a finger. Ten thousand single digit impressions can be recorded on a laptop with 40 GB hard disc, the live scanner which is being used in the Central Finger Print Bureau has 40 GB storing space.

The impressions can be recorded on the live scanner simply by rolling the finger on the scanner window, which has a hygroscopic film coated on its surface to avoid slippage and also to provide a little moisture for clear prints. The technique is simple and good quality prints can be recorded after basic training and practice.

The 10-digit slips created electronically by using the live scanner can be stored by taking their prints; the hard copies may be stored for future reference. The technique of recording of inkless fingerprints is simple and policemen working at local police stations can be easily trained to utilize the system.

Discussion

India has sought to emphasize at international fora that terrorism is a global menace to which democracies are particularly vulnerable. India has called for concerted global action to counter terrorism and to ensure the enactment of measures such as sanctions against states responsible for sponsoring terrorist acts across international borders.

Most illegal entries of individuals into India are through our porous borders. Fencing has certainly helped, to a great extent, in checking cross border immigation, but the menace of unauthorized entry has not been contained completely. The basic reason is that illegal entrants melt away into the local population residing in the bordering villages and town, which is facilitated by their similarity in appearance. The religious faith of the illegal immigrants also sometimes can be a factor, which goes in their favour, for finding acceptance amongst the locals. So, identification of all those who are not the bonafide or genuine citizens of India is the first and foremost step in arresting and taking legal action against them. Fingerprints have been used as a reliable tool for individual identification for over a century. Computerization of fingerprints is a step further in the modernization of forensic science; there are many biometric tools available for distinguishing individuals. Live Scanner is a portable fingerprint scanning system, which we would wish to suggest for then-and-there distinction

of illegal immigrants from the bonafide residents of bordering areas in India.

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FORENSIC IDENTIFICATION OF THE DEADBODY OF A FOREIGN NATIONAL - A CASE REPORT

J.R. Gaur*, Narbir Singh Thakur**, V.K. Mishra***

Introduction

Since 1981 the Swedish Embassy in India was continuously in touch with the Govt. of India and the Govt. of Himachal Pradesh, to know about the whereabouts of the missing trekkers. Lahul and Spiti Police wanted to know whether the body extricated from Kangla Jot Glacier belonged to Ms. Margot Lydia Alluki Ryyanen, the Swedish trekker or otherwise. The missing lady was believed to have died at the glacier about 23 years ago.

Some General Observations at the time of Postmortem Examinations

1. The body was found mummified as it was lying in extreme cold conditions for nearly 23 years.

Near-match with Swede's records

TIMES NEWS NETWORK

Shimla: The physical features of the body brought here from the Kangla Jot glacier on Thursday for forensic examination matched with the identification of the 23-year-old Swede, Margot Lydia Aulikki Ryynanen, who had been reported missing by her mother in Stockholm in Feb 1982.

Head of the department of forensic medicine, V K Mishra told Times News Network that he had conducted the postmortem on the frozen body on Friday.

As per the postmortem, the body is of a woman, about 30 years of age, and five feet six inches in height, he added.

He said that the hair is golden in colour and the dental cards sent by the Swedish embassy in Delhi, match with those of the body received and most of the information on the physical aspects of the Margot tally with the body brought here.

"However, though the dental cards had matched with the teeth on the body, I have asked that if possible X-ray of her dental cards could be sent so that they could be further verified," he added.

Asked, how they would help when almost everything was matching, Mishra said that, though it could be said that the body was of Margot, but to make it doubly assure, he had called for the X-rays for finer examination.

"You see a dental card says that there is a filled cavity in the teeth and another in the fifth tooth. The cavities have been filled, but an X-ray tells at what degree and to what length, which can be further tallied," he added.

Ascertaining that the particulars received from Sweden regarding Margot, match with the body received, he said it was complete, except for the fact that it had shrivelled, which would have been in the case of a body frozen for over 20 years.

To the question whether there were any injury marks on the body, he said that there were no such marks, indicating that the trekker had neither suffered any fall while trekking, nor had she been attacked by any wild animal.

Asked what could be the cause of death, Mishra said, most possibly it was due to cold or hypothermia, as it is called in the medical parlance.

Meanwhile, chief secretary Kanwar Shamsher Singh said, the Swedish embassy was in touch and had asked for the forensic and postmortem reports of the body to be sent to them, where after, they would decide on the next course if action

A policeman shows the passport of a Swedish woman Margot Lydia Aulikki Ryynanen, whose body is believed to have been recovered from Kangla Jot glacier, in Shimla on Friday. Ryynanen had disappeared during a trek 23 years ago.

Keywords :

Margot Lydia,

Lahaul and Spiti,

Kangla Jot Glacier,

Maxilla,

Mandibular,

Dental restorations,

Radiographic.

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Abstract :

A female Swedish National Ms. Margot Lydia Alluki Ryyanen travelled to India along with her boyfriend on tourist visa. They entered India from Pakistan through Wagah border on 4th April 1981 and reached Amritsar in Punjab. From Amritsar, these two tourists travelled to Himachal Pradesh and visited Kullu and Manali area. Both these tourists went to Kangla Jot Glacier for trekking in District

2. The external morphological character of the body indicated it to be belonging to a young female with golden hair.

3. The skin of the body had dried up and had turned dark brown.

4. The body did not emit any putrefied smell indicating that The internal organs have also dried up. However, the adipose or fat tissue in the body has transformed into wax.

it remained well preserved in snow at the glacier.

5. The garments and fractured snow boots were removed from the deadbody.

6. The passport recovered from the garments bearing the name of Margot Lydia Alluki Ryyanen indicated that the body could belong to her.

Photograph of the Swedish Trekker, Ms. Margot Lydia Alluki Ryyanen as found on passport.

News Item on the Identification

7. The weight of the body was found to be about 30 kg.

8. The stature of the female person was measured from the deadbody to be about 5 feet six inches.

9. No external or internal injuries could be found on the deadbody indicating that the person could have died in captivity at ultra low temperature at the glacier ranging from -35^0 to -45^0 centigrade in winters.

10. The black and white photograph of the lady was intact on the passport (but slightly damaged).

11. The age calculated from the date of birth on passport matched with sutural age that is 29± one year.

Anthropological Examination and comparisons from the photograph(on passport) and the Deadbody

Following somatoscopic features matched in the photograph and the deadbody:-

- Long face

Lahaul and Spiti from Manali.They went missing since 1981 from the glacier. Margot Lydia Allukki Ryynanen was reported missing by her mother in Stockholm in February 1982.

The deadbody of one female was spotted at the glacier in September. 2004. It was extricated by the Lahul and Spiti Police with the help of experts and was brought to Indira Gandhi Medical College, Shimla for post mortem

examination and identification. The deadbody of the female was examined by the forensic experts from medical college and State Forensic Science Laboratory, H.P. and then was sent to H.P. Govt. Dental College and Hospital Shimla on 18-09-04 for Dental Identification to make it more reliable because the only record available was her dental data. The last dental treatment was done in the year 1973. No information was available

- Oval chin
- Broad vertical forehead
- Large eyes
- Imperceptible eyebrows/ supraorbital ridges
- Small nose
- Narrow mouth
- Straight head hair of the length upto shoulder.
- Slight Alveolar prognathism (in photograph) and slight protrusion of upper central incisors (on the deadbody).
- Small ears with attached earlobes and angular alignment of toes in the foot as observed in the deadbody were Caucasoid features but could not be observed in the passport size photograph.
- Five anthropological indices calculated from the measurements taken on the face of the deadbody and in the photograph matched with each other on the photographs of the deadbody and the passport.
- Seven geometrical angles measured on the face by using available landmarks also matched with each other.

Dental data of Ms. Margot Lydia Allnki Ryyanen as provided by the Swedish Embassy in India

Dental Examinations

Odontological Examinations and Comparisons are as follows:-

- Ms Margot Lydia Alluki Ryyanen family was contacted in an attempt to find dental records.
- The Odontological data of Ms. Margot Lydia Alluki Ryyanen provided by Swedish Embassy in India was compared with the dentition of the deadbody.

Following observations were made :-

- The total 32 maxilla-mandibular teeth erupted as stated in the dental records matched with the deadbody.
- The dental fillings in the mandibular and maxillary teeth stated in the dental record also matched with the deadbody and the dental X-rays taken for the purpose.

Extra oral examination

There were incisions present on both sides of cheeks given by forensic expert to check her dental status.

- Nose was showing depression
- Orbits were empty
- Facial colour was brownish black pigmented

Intraoral examination

Palmar notation was followed for her dental evaluation.

Dentition Present

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3	2 3 4 5 6 7

Dental Restorations present

Silver Amalgam restorations present in

8 7 6 5	6 7 8
8 7 6	5 6 7

Radiographs done

- OPG view (Photograph)
- Occlusal view of the maxilla and mandible

about treatment after the year 1974.

It was only after matching the dental records with the corpse of Swedish women whose body was bought from Kangla Jot Glacier to Shimla doctors confirmed that the body was of the Swedish National.

- Lateral oblique view of the Right and Left side skull

Radio opaque restorations present in

8 7 6 5	6 7 8
8 7 6	5 6 7

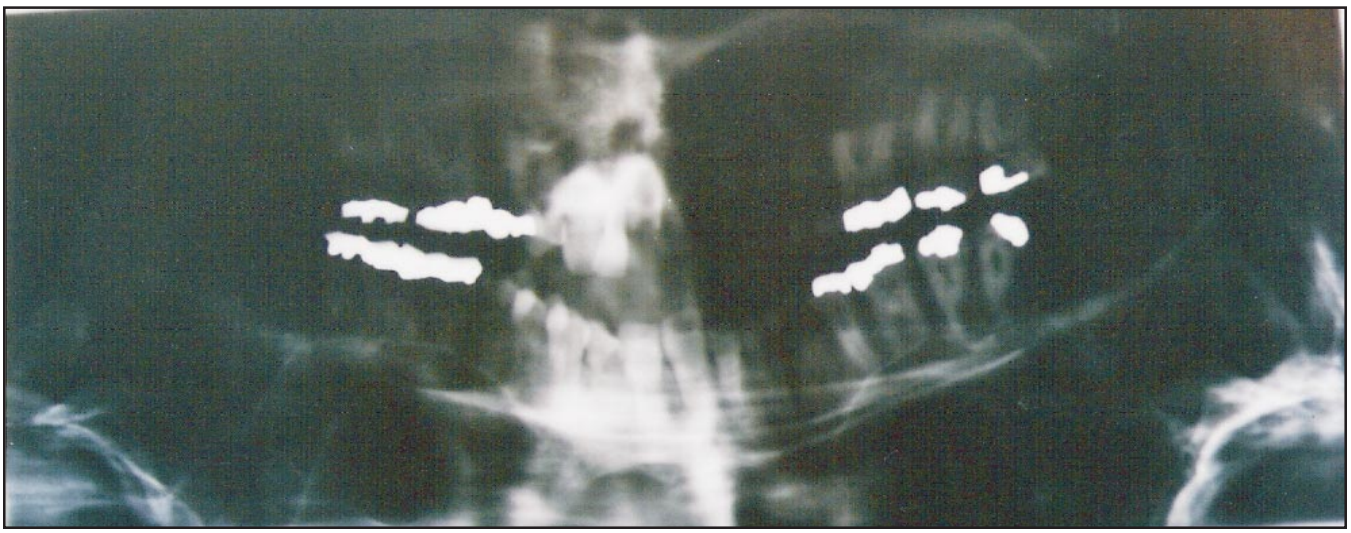
Unossified alveolar socket of Missing

2 1	1

Radiographic findings of OPG view of the skull

Lateral oblique view showed a tooth present in the floor of the mouth

Occlusal view of the maxilla was very helpful in establishing the identification as there were tooth coloured (composite restorations in the Maxillary anterior teeth) which were not otherwise visible.



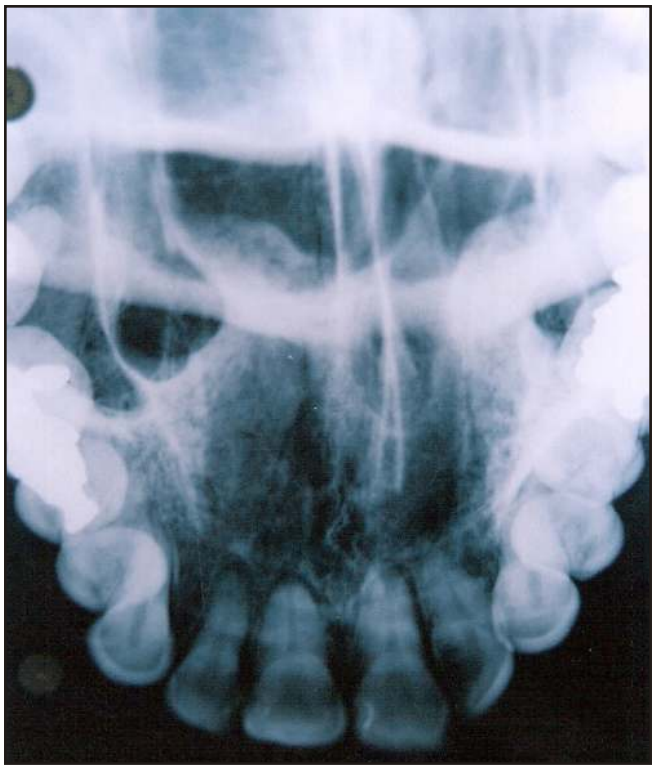
Mesial and Distal fillings in

2 1	1

- As per the record of the Dental data received from The Embassy of Sweden done in the year 1973 for Margot Lydia
- No restorations were present in

8	
8	

There was intact	
	8



As per the visual and radiographic findings obtained on 18-09-04.

Silver Amalgam restorations was present in

8	
8	

Missing

	8

(Which she may have got extracted after 1974)

The reason being that there was no record of her dental treatment done after 1974 till her death in 1981.

For missing

2 1	1

There may be postmortem tooth loss of three mandibular anterior teeth as the alveolar socket with unfractured margins and no reossification of socket can be seen in the radiographs and one of the teeth can be seen in the floor of the mouth on lateral oblique view of skull left side.

Samples preserved for DNA Typing

Samples of hair, nails and skin were preserved for DNA Typing and were handed over to the Police for further examination and comparison if required. However, samples for comparison could not be obtained in the case for obvious reasons.

Results and Conclusions

The mummified deadbody of female were recovered from Kangla Jot Glacier in Himachal Pradesh after 23 years was identified to be of Ms. Margot Lydia Alluki Ryyanen, the missing Swedish trekker since 1981. The identity was established within reasonable degree of scientific certainty on the basis of Odontological, Anthropological and Czzircumstantial evidence. Hence it could be concluded that Odontological/Dental Identification, Anthropological and Circumstantial evidence are of utmost importance for establishing identity if sufficient data of missing persons is available for comparisons. Forensic Odontology is the best method to identify burned and decomposed bodies.

- The Swedish embassy disposed off the deadbody after obtaining satisfactory identifying report.

Sealents and other composite resin restoration which are often difficult to detect clinically may be not visible on antemortem or postmortem radiographs. The occlusal radiograph has played a very important role in this case.

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FORENSIC SUPPORT SYSTEM IN THE INVESTIGATION OF NARCOTIC DRUGS & PSYCHOTROPIC SUBSTANCES

B. R. Rawat*

Introduction

A drug can be defined as a natural, semi synthetic or synthetic substance that is used to produce physiological or psychological effects in man. Alcohol, Bhang, Chars, Ganja, Opium, LSD, Heroin, Cocaine are drugs of addiction and are extensively used depending on the socio-culture needs of the time. The search for a perfect drug, which would cause euphoria without producing after effect or complication so far, has been unsuccessful. In modern context, drugs means something different to each person; to some drugs are a necessity for sustaining and prolonging life, to others drugs provide an escape from the pressures of life. The law enforcement agency is concerned with latter type of drugs which are widely abused.

Whether "Plant-based, such as opium, morphine, codeine heroin, cocaine cannabis, or synthetic, such as the various amphetamines, methamphetamines, pethidine, methadone, designer drugs fentanyl derivatives such as methylfentanyl is 200 times as potent as morphine and 3-methylfentanyl is 7000 times as potent as morphine. Illicit drugs are normally complex mixtures which rarely contain the drug alone. As a product, their chemical composition shows large variability. As well as containing the drug itself, its samples may contain one or more of the three different types of key components:-

Natural components present in raw materials (e.g., coca leaf, opium) used for the production of certain "plant-based" drugs such as cocaine or heroin, which are co-extracted during drug production, and which are not completely removed from the final product.

By-products: These are generated during drug manufacturing and related to the method of manufacture. Samples of synthetic drugs such as amphetamines may contain various synthetic impurities consisting of residual traces of chemical essential to the drug manufacturing process and by-products resulting from side reactions. The presence and relative concentration of these impurities are dependent upon the quality of the

Key Words :

Narcotic drugs & Psychotropic substances,

Characterization,

Impurity profiling
Forensic Support,

Investigation.

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Abstract

Drug characterization studies can provide information useful for drug law enforcement authorities in investigating the cases pertaining to Narcotic Drugs & Psychotropic Substances. Chemical links between samples can be established and material from different seizures can be classified into groups of related sample. Most useful for law enforcement authorities, specific links

starting materials used, the route of synthesis, the reaction conditions, the extent of purification of the final product, and overall upon the skill of the clandestine chemist.

Cutting agents: These are added at any point in the distribution chain, subsequent to drug manufacture. The drug supply chain is long and complex, consisting of the producers, traffickers, distributors, suppliers and users. Once the drug is processed or manufactured, a drug producer may supply to one or more traffickers, a trafficker may supply to one or more distributors, a distributor may supply to one or more suppliers and a supplier may supply to one or more drug users. At each stage of the chain, cutting agents may be added with the result the impurity profile of the drug may become more complex. The farther away the drug from source, greater is the chances that diluents and adulterant will be added.

Although all samples of the same drug prepared in the same way could be expected to contain the same impurities (excluding cutting agents which may be added at any stage in the distribution chain), their relative concentrations may show large variations. These variations may be attributed to the exact nature of the starting materials or to the specific method by which the drug has been processed, manufactured, distributed, or stored..

Detailed chemical analysis of drug samples enables measurement of the relative concentrations of major, minor and trace components (with appropriate analytical methods, complex chemical profiles can thus be obtained with different drugs samples). By such an approach, a characteristic chemical signature can be assigned to every drug sample. These impurity profiles may contain natural components, by-products and cutting agents. Examination of all the components of sample, can provide a complete "history" of the sample, and may therefore play a key role in characterizing samples and provide useful information for investigating agencies.

I. Drug characterization studies : possible information

1. Law enforcement authorities often require evidence to link drug dealers and users, or they may want information on local distribution network. Forensic laboratories are then asked to determine whether samples of seized drugs are related. By identifying similarities and difference between drug samples, the information generated by drug characterization studies can be used to help answer the following questions:-

- Are two or more drug samples connected?

- Does this relationship provide a link between, for example, a drug dealer and a user?
- Does the relationship between samples provide any useful information relating to local, national, regional or international drug supply and distribution networks or any information as to the extent of such networks?
- Where does the sample come from (e.g, geographic origin, laboratory source)?
- What is the method of clandestine drug production? Which specific chemicals are employed in the manufacturing process?

2. From an investigation point of view, sample characterization studies can therefore be carried out either for evidential or for intelligence purposes. They may thus be used either to help to confirm a connection between two or more samples, for example, drug supply cases for prosecution purposes. Or they may be used to provide more general intelligence information such as the identification of local, regional or international distribution networks and sources of drug supply, in support of law enforcement investigations.

3. Depending on the nature of the drug sample investigated, the information generated through, drug characterization studies may be used to identify from where, how, and to what extent the drug has been distributed. It may be used to provide background intelligence on the number of sources of drugs, on whether those sources are within a country or are "internationally" based, and on points of drug distribution and drug distribution networks. Information from drug characterization studies may also be used to estimate how long a particular laboratory has been in operation, and to assess the scale and output of a drug operation.

4. At the national and international level, examination of samples may provide valuable information to identify new or established trafficking routes and distribution patterns. Further, in some cases, the identification of geographic origin (region or country), and sources of international supply, may be used to estimate what percentage of the drug reaching a country has come from which of the different drug producing areas of the world. Drug characterization and impurity profiling may also assist in the identification of output from new illicit laboratories, and in the monitoring of common methods used for clandestine drug manufacture. This, in turn may provide information helpful to the maintenance of other intelligence gathering tools, for example,

between suppliers and users can be established, drug distribution patterns/ networks can be built up, and the source, including the geographic origin of drug samples may be identified. The exact purpose of any comparative study determines the analytical approach. The Forensic chemist has to take care in interpreting the results, taking into account peculiarities of different drug types and the implications of the presence or absence of

different types of impurities, namely manufacturing impurities and cutting agents. Close cooperation between laboratory and law enforcement personnel is essential to maximize the operational value of drug characterization studies for law enforcement investigation work.

precursor monitoring programmes. Finally drug characterization and impurity profiling studies may provide supportive evidence in cases where a differentiation of illicitly manufactured drugs from those diverted from legitimate sources is required.

II Practical value of drug characterization and impurity profiling studies for law enforcement investigation

From an investigative point of view, drug characterization and impurity profiling studies can serve. The following purposes in investigation of cases.

(a) Establishing specific link between two or more samples

1. Attempts to link samples are aimed at establishing a connection between the samples. Ultimately, that information may be used by law enforcement agencies to establish link between different individuals from whom those samples were seized. Links between samples can be established at various levels, such as source (drug production) or the different stages of drug supply. The fact that impurity profiles can be shown to coincide is of high evidential value, particularly in local distribution cases such as dealer and user cases. Ultimately, the establishment of a relationship between two drug samples may have a major impact on charges and penalties for the individuals involved (e.g. trafficking charge versus possession, etc.).

2. While providing sound scientific facts, however, chemical characterization studies are only a part of drug comparisons work overall, particularly in cases for evidential purposes where evidence of links is to be presented in court. Results have to be complemented by other information about the samples in question, for example on purity, appearance, packaging etc., and with information relating to the presence or absence of cutting agents.

(b) Establishing drug distribution patterns

1. It is possible to classify material from different seizures into groups of related samples. The identification of such groups may provide useful information in relation to trafficking patterns and distribution networks. Established groups may represent different laboratories or different drug related organizations. The size of a group and the time span over which samples falling within the group have been seized can furnish information on the scale and period of drug operations. Chemical comparisons of clandestine drugs are particularly useful for the

investigation of small scale or local drug supply networks. Such information is, in turn, of value in relation to the confiscation of financial assets.

2. For natural and semi synthetic drugs, such as cocaine, heroin or cannabis, the establishment of distribution patterns and network is not easy. This is largely due to the fact that there is little or no information on what constitute a "batch" of natural or semi synthetic drugs. Moreover, it is by no means certain that large illicit consignment of such drugs constitute the product of single batch. There is also only a limited information on the extent of manufacturing impurities across batches, countries or geographic region with drug of this type. However, using multiple analytical techniques and with the support of intelligence information and physical properties such task is not impossible.

3. In the case of synthetic drugs such as amphetamines, by contrast, large groups of related samples can be identified, both nationally and internationally. This is of value in that it lends drug enforcement agencies both the time and the opportunity to investigate and then follows up background information associated with a series of related drug seizures. Good intelligence about major dealers in an operation may thus be obtained, and major centres of drug supply may be identified. Conditions of clandestine manufacture are usually controlled with synthetic drugs than natural and semi-synthetic drugs. Inter batch variation may thus be sufficiently small. Samples produced by an established method, though in different batches, the same illicit laboratory may be linked by their impurity profiles.

(c) Monitoring methods used for clandestine drug manufacture

Detailed examination of impurity profiles and identification of impurities may provide information about the method and conditions of drug synthesis, and the chemicals used. Qualitative information thus generated may be a valuable tool to regulatory authorities, for instance, to identify new targets in precursor monitoring programmes and to alert to new drug trends. This is more relevant for synthetic drugs, with their higher flexibility in the clandestine manufacturing process. Such an approach, routinely used may also help to identify trends in the use of solvents and other chemicals used for heroin and cocaine processing.

(d) Identifying the source of drug samples

The main aim of determining the source of a drug sample is to identify its geographic origin, the clandestine drug production or the source of supply and distribution of the sample.

Opium Source Determination

Opium is generally encountered in one of the following four forms:-

1. Raw Opium: It is simple dried opium latex and it will always contain some quantity of plant fragments as a natural outcome of the harvesting methods employed. Distinguishing feature of raw opium are it's characteristic odour, the presence of plant fragments, and the presence of meconic acid and porphyroxine.

2. Prepared Opium: It is also known as cooked opium and is most often produced by dissolving raw opium in hot water, filtering, and evaporating until the filtrate again become a solid paste. This is used almost exclusively for smoking purposes. It will give positive test for meconic acid and negative test for porphyroxine. Plant fragments and characteristic odour of raw opium will be absent.

3. Opium Dross: It is residue left after opium which has been smoked. There are many local names for dross; in South East Asia it is known as "Chandu", while in Iran it is known as "Sukhteh". Dross does not give positive test for meconic acid or porphyroxine.

4. Medicinal Opium: It exist in three forms :-

(a) *Granular and Powdered Opium:* It is opium dried at 70°C and diluted with lactose to give morphine content between 10 and 10.5% by weight.

(b) *Deodorized Opium:* It is obtained by treating opium with petroleum ether, which removes both narcotine (noscapine) and the characteristic odour of opium. The concentration of morphine is also 10 to 10.5% by weight.

(c) *Concentrated Opium:* It is also known as Pantopon, Omnopon or Papaveretum. It is mixture of morphine, codeine, papaverine and noscapine as a hydrochloride salt with morphine contents adjusted to approximately 50% by weight.

Since the late 1940's and on to the present time, there have been a large number of scientific investigations, which aim was to relate the relative/absolute alkaloids contents of opium to the geographic source of opium in the world. The consistent trends of alkaloids content of opium of some countries are :

1. Opium from Thailand and Myanmar usually have the lowest papaverine content.
2. Opium from Pakistan and Afghanistan tends to have the highest noscapine content.
3. The highest thebaine content is consistently found in opium of Iran.
4. Opium of America consistently have the lowest the baine and highest papaverine labels.

However, there is no statistically significant relationship between morphine or codeine content and opium origin.

Heroin Sources Determination

Each major geographic source area produces the heroin that on averages is different from those found in the other producing regions. As a result, each major source area produces the heroin that can usually be recognized as a chemically distinct type.

1. South East Asian Heroin : Southeast Asian Heroin is nearly always a white, sometimes slightly off-white powder. When uncut and present as the hydrochloride salt, South East Asian Heroin samples will often have a particle size and appearance similar to laundry detergent. In most instances, uncut South East Asian Heroin hydrochloride will be 80% or higher in purity, only rarely contains noscapine, and papaverine is nearly always absent.

2. South West Asian Heroin : South West Asian Heroin samples are far more variable than those from South East Asian Heroine. The most common form is a medium brown, free flowing somewhat granular powder which looks much like its common U.S. street name, "brown sugar." Typically, when uncut, the heroin will be present as the free base at a purity of 40-60%. The second most common South West Asian Heroin is a tan to light brown, free flowing somewhat granular powder which when uncut, typical has heroin purity of 60-85%. The third South West Asian Heroin type is a free flowing white to off-white powder which is nearly encountered as hydrochloride salt. An uncut sample of this highly refined material can have a heroin purity of 90%.

3. Mexican Heroin : Mexican heroin is typically one of two types, which bears street name of Black tar and Mexican brown.

Black tar: Black tar heroin is dark brown to near black in colour, is sticky amorphous tar like substance, will frequently have the characteristic odour of acetic acid. A typical uncut black tar will have a heroin purity of 30-60%.
Mexican Brown: It is generally dark brown in colour and is a coarse granular powder of lower purity than black tar heroin.

4. South American Heroin : Uncut heroin from South America is nearly always a high purity (>90%), free flowing white powder.

Discussion

Drug characterization and impurity profiling studies can establish specific links between two or more samples, classify materials from different seizures into group of related samples, thus building of distribution networks, identify the source including the geographic origin of drug sample and to monitor clandestine drug production methods and the chemical used. These information may be used for evidential purposes or may be used as a source of intelligence to identify samples which have a common history.

Drug characterization is a multi disciplinary collaborative exercise. Maximum usefulness of drug characterization/impurity profiling studies can be expected if close collaboration between laboratory, police and customs authorities and mutual understanding of purpose, needs, possibilities and limitation of drug characterization/impurity profiling studies are ensured. Since the specific aim of any comparative study determines the analytical approach, there is thus the important need for law enforcement personnel to be clear in specifying the information they expect from the Forensic Chemist. It is also important that drug impurity profiling is not a routine analytical technique. In order to have more insight into seized drug samples than by normal chemical analysis, and to identify any link between two or more seized drug sample, specialized and experienced chemist with dedicated equipments are required because any drug characterization and impurity profiling programme will be used to build appropriate database of results for interpretative purpose.

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EMOTIONAL PROBLEMS AMONG CENTRAL RESERVE POLICE FORCE PERSONNEL : AN ANALYTICAL STUDY

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Keywords :

Emotional problems,

Emotions,

Expressions,

Behavioral impact,

Internal security scenario,

Stress,

Psychological perversions,

Health,

Anxiety.

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Emotional problems are a fact of life and inevitable in this age of intense competition, increased expectations and several other socio-economic activators. Nevertheless, emotional problems have always been present and will continue to be present irrespective of gender, age, social composition and profession. However, the emotional problems seem to be inherent in uniformed services. In recent years, the level of the intensity of this problem has gone up very high, due to pressure to deal with internal security scenario and shift in socio-cultural life-style. Such problems are manifested in suicides, shooting of colleagues/ seniors, human rights violation and other psychological perversions as well as mental illness. This is a matter of concern for all and serious deliberations are required regarding its causative factors and possible remedies. There is a need to examine the emotional state of the Central Reserve Police Force personnel in working environment of the Force, and to establish the reasons for emotional strain and the resultant mental stress. An attempt should be made to provide possible solutions to the problems causing such emotional stress.

Emotional problems are multifaceted processes that occur as reaction to events or situations in our personal as well as professional environment, which keeps changing from time to time. In other words it is the physical and emotional responses to a given situation, which are perceived as novel, frightening, confusing, exciting or tiring that are neither usual nor normal. Emotional problems not only result from external factors but can also be generated by our hopes, fears, expectations and beliefs.

Emotional problems also arise out of the demands made upon the adaptive capacities of the mind and body. There are some features of our emotional problems which result in a wide range of physical and physiological, overt as well as covert changes in varying degree among different persons.

The emotional problems faced by the Central Reserve Police Force (CRPF) personnel are substantial as they are almost

intrinsic to the job, in which continuous deployment under strenuous circumstances at places away from home and families are inescapable. Besides this, a man in this transitional phase of changing values and life styles is likely to be perplexed, confused and in a state of emotional arousal. The concern for families, the education of children, the quality of working life and the need to overcome the psychological barriers which result from frequent change of locations, culture and ethics are the possible factors that might cause emotional problems among CRPF personnel. A clear understanding of the problems of the CRPF personnel in this regard is very important, as this Force is deeply involved in the maintenance of internal security of the country. However, no such study has been done so far.

The Concept of Emotions

The emotions of an individual are very important for his role and commitment he will have for his social and organizational obligations. Emotion is a very complex concept and scholars vary in their opinion as to what extent it guides one's organizational behaviour as well as emotions being structured/aroused in individuals due to organizational cultural and sub-cultural influences.

A few famous definitions of emotions are :-

(a) **Woodworth** (1938) defines emotions as a stirred up state of an individual. It is a disturbed muscular and glandular activity.

(b) **Buck** (1988) writes "I define Emotion as the process by which motivational potential is realized or read out when activated by challenging stimuli." This broad definition implies that emotion is a mechanism which convey information about motivational system .

(c) **Fernald and Fernald** (1999) Defines emotion as a complex feeling state accompanied by physiological arousal and overt behaviours. This implies that emotions have many aspects, out of which two are very important internal physiological states and overt actions.

(d) **According to Baron** (2001), emotions are reactions consisting of subjective cognitive states, physiological reaction and expressive behaviours. This implies, unlike motives, emotions originate due to other stimuli. They are reactions. The reactions are external as well as internal. We are aware of these reactions, we

Abstract

Emotional problems are multifaceted processes that occur as a reaction to events or situations in our personal as well as professional environment which keeps changing from time to time. It arises out of the demands made upon the adaptive capacities of the mind and body as well as the bevioural pattern of the people around the person and thus inevitable in this age of

intense competition, increased expectations and several other socio-economic activators. For Law enforcement organizations like CRPF paradoxically, these are intrinsic to the job nevertheless, personal needs are sensitive enough to perform their duties without being under its influence or impact.

The expectations of employees in the organization continuously changes and prevalent

are conscious of them, though this consciousness varies in different individuals.

Characteristics and Expressions of Emotions

Emotions are affective, cognitive and conative. It is related to pleasant and unpleasant feelings or affective states. They are cognitive because we are conscious of emotional experience. Moreover' the intensity and kind of emotion we experience depends on the cognitive label attached to it. If arousal is experienced in a quarrel, it is labeled as anger, if it is experienced in a sexual situation, it is labeled as love, and if it is experienced in job dissatisfaction it is frustration. Emotions are always accompanied by overt expression. They impel an individual to act in certain way. Consequently, they are also conative in nature.

Emotions imply a stirred up activated state of the organism that ranges from positive to negative. They may lead to approach or avoidance of environmental stimulation. Emotions are sudden; an individual is prepared for an emotion. Neither can an emotion be practiced or rehearsed. Emotions are sudden reactions of internal or external stimuli. Emotions can be evoked by a variety of stimuli. They occur when motives and instincts are thwarted or satisfied. They are evoked by environmental stimuli. They can occur due to memories, for they can be shown in anticipation of future events. However, reason may provide a reasonable check on emotion. The emotional response is weakened by the application of intellect e.g. reasoning can change the extreme emotions of rage into mere irritability.

Emotions are closely linked to motivation in terms of organism's reactions, internal as well as external; no distinction can be made in emotions and motivation. Nevertheless, these are only a few conceptual distinctions whose close analysis is must for organizations like CRPF. Motives are relatively enduring, whereas emotions are transitory. Motives act together as a single entity; emotions are many and often in conflict with each other. Motives generally lead to organised behaviour, emotions lead to disorganization of behaviour.

Emotions are the most personal experience. Each individual experiences them in different way and he himself is the best judge of its nature and intensity. There are individual variations in emotional expressions. The expression of emotions varies from one person to another depending on the reinforcement the individual has received for emotional expression,

particularly from the parents, relatives and colleagues. There are cultural variations in emotional expression. Exactly how an emotion is expressed depends on the society and culture e.g. the expression of grief varies from one culture to another.

There are cross-cultural similarities in emotional expression. People from a wide variety of cultures accurately identify facial expression of a range of emotions. People from different cultures also agree on the emotional significance of non-verbal features of speech such as pitch, loudness etc.

Emotions can not be hidden. Even if they are not expressed directly, they are expressed indirectly in the form of subtle body language. Even if anger is not expressed in words or actions, it is expressed in a stiff body posture and clenched hands. Emotions appear at all ages. A child is perhaps nothing but bundle of emotions. As he grows, he experiences a differentiation of basic emotions into a variety of emotions. One can observe emotions in a person till death. A young baby can be made angry by checking his movements and an old man by hurting his sentiments. Emotions are affected by maturation and learning. An adult is capable of controlling his emotion more effectively than a child. He can also display a wider variety of emotional expressions. Cultural differences in emotional expressions also support the idea that emotions are affected by maturation and learning. Emotions also form the raw material of sentiment when a number of emotions gather themselves around an object and persist for a relatively long period; this system of emotions is called a sentiment. So the sentiments, are based on emotions. These emotions and sentiments affect the organizational behavior of a man and that also affects the organizational efficiency and effectiveness.

Behavioural Impact of Emotions

The emotions have impact on individuals in his interpersonal relations as well as his social collectivists group process. The impact of emotions are reflected in an individual in many ways. It affects the whole organism. The individual is disturbed and stirred up mentally as well as physically. Activation is reflected in the physiological correlates of emotions, which can be measured to assess the intensity of emotions. Some of these changes are like change in blood pressure, heart beat, volumetric changes, respiration, muscular tension, oral temperature, pupillary response, salivary secretion, gastrointestinal activity, eye blink, brain activity scanning.

socio-economic structures have substantial impact on it. Organizations are expected to be aware of the causative factors of emotional distress since it has a detrimental effect on the overall efficiency. Such studies have never been carried out to assess it's cumulative effects on the effectiveness of the Security Forces.

The physiological correlates of activation are reflected in external signs of emotions such as facial expressions, vocal expression, role of hand in emotional expressions etc.

The impact of emotional problems generally noticed among CRPF personnel and other uniformed services are as follow :-

1. Anxiety (nervousness, tensions, phobias, panic)
2. Depressions (sadness, low-self esteem, apathy, fatigue)
3. Guilt and shame (projection, poor self assessment)
4. Loneliness (social isolation, selective inattention)
5. Moodiness (negative mood, swings, problem focusing attitudes)
6. Personal Inadequacy (inefficiency, incompetency)

Besides these effects and feelings they suffer from following behavioural and cognitive factors :-

1. Difficulty in sleeping/early waking
2. Emotional outbursts/aggressions
3. Excessive eating/loss of appetite
4. Excessive drinking and smoking
5. Accident proneness/trembling
6. Avoidance/inactivity
7. Difficulty in making decisions
8. Frequent forgetfulness
9. Increased sensitivity to criticism
10. Negative self critical thoughts
11. Distorted ideas, more rigid attitude

Generally, because of above factors the personnel perform poorly in job and they have poor interpersonal relations besides indulging in indiscipline and human rights abuses. Physically at individual level they suffer from hypertension, muscle contraction, nervous breakdown etc.

The Possible Factors of Emotional Problems

The emotional problems among CRPF personnel are at both personal and professional fronts. From my studies carried out in CRPF, experiences in field as well as at Academy where I got ample opportunity to interact with lots of officers and men, I find following possible areas which might be causing emotional problems.

(a) Emotional problems due to role conflict.
(b) Emotional problems due to lack of social skills resulting in varied problems at job as well as in life.
(c) Emotional problems due to lack of interpersonal skills in managing peer pressure, jealousy and enmities.
(d) Inability to perform up to the satisfaction.
(e) Emotional problems because of health problems.
(f) Emotional problem because of lack of social and sexual life.
(g) Feeling of uncertainty and insecurity.
(h) Excessive/uncertain mobility that too at a very short notice.
(i) Long separation from family.
(j) Dilemma over social responsibility.
(k) Odd and hostile working environment.
(l) Poor organizational working condition.
(m) Financial crisis due to maintenance of more than one establishment.
(n) Emotional problems due to toxic bosses.

The ability to manage feelings and handle emotional problems is of paramount importance for professional successes. The CRPF requires more attention towards assisting and training of personnel, in coping emotional problems in view of the continuous deployment for operational tasks, and its expanded role of being entrusted with complete internal security matters in future. In this organization, most of the personnel suffer from lack of motivation, low moral and fatigue, carelessness and casual approach towards tasks and increasingly neurological problems.

Among CRPF personnel, there are also educational barrier, cultural diversities and individual characteristics

of different men, which makes any common strategies an eye wash only. To counsel and assist in coping emotional problems through Sainnik-Sammelan, interviews and departmental welfare measures apparently did not help much. The need of the hour is that the individuals be paid separate attention towards their problems to relieve them of their personal irritants in life and encourage or advise them to make decisions to avoid perpetuation of negative tendencies. These activities will be very useful to CRPF as it is certain to enhance the efficiency and effectiveness of its personnel whose professional competence is bound to take forward leap. However, the question remains open for discussions and deliberations as to what extent it is possible to pay attention to each individual in force having strength of more than 240 thousand personnel and is it possible to evolve a common strategy? The answer to this question should be attempted through surveys, interaction with leadership of CRPF and expectations and need analysis of CRPF personnel.

The studies on "Emotions" revealed that the emotional faculty guides our moment-to-moment decisions, working hand in hand with the rational mind, enabling or disabling through itself. Likewise the thinking brain plays an executive role in our emotions. Except in those moments when emotions surge out of control and the emotional brain runs rampant.

In conjunction with other administrative and operational problems of CRPF, possibly the emotional problems are also causing serious troubles for the organization. The most important and obvious effect is increased cases of indiscipline; constant emotional problems make the personnel more irritable, impatient and due to which indiscipline at the place of duty is on the increase. The cases of misbehaviours with public, seniors and even with own colleagues are on the increase.

Among a few personnel the continuous emotional disturbances lead them to think that there is no end to their problems. This generates suicidal tendencies in them. The one with weaker mind fails to cope up with this continued troubles and thus commits suicide. The other few resort to alcohol consumption and drug intake for temporary and momentary relief from emotional disturbances. The department, of late, is facing increased accidents including vehicle accidents in all probability due to emotional problems causing stress. The physical and behavioural effect of stress manifest in the form of insomnia, restlessness, fatigue, irritability, difficulty in concentration, decision-making dissonance and various physical and mental disorders. This makes the personnel more prone to commit mistakes resulting into accidents. That is why the cause of accidental firing and vehicle accidents are on increase.

The other aspect evident as a consequence of possibly emotional problems caused probably by frequent movements, low pay, low promotional prospect, career stagnation, poor chance of career development, poor social status, separation from family and constant fear and danger associated with the job are compelling more and more personnel to proceed on discharge or voluntary retirement so that they may lead peaceful settled life with their family.

The combined effects of emotional turmoil have a detrimental effect on the overall efficiency of the force. Since the persons are pre-occupied with their own problems most of the time, they are unable to give their best to the organization.

There may be multiple reasons why people under emotional disturbance are more vulnerable to sickness. One might be that the way people try to soothe their emotional anxiety for example by smoking; drinking and food habits are in themselves unhealthy. Still another is that constant worry and anxiety can make people lose sleep or forget to comply with medical discipline - such as taking medication. Most likely all

of these work in tandem to link emotional problems with the disease.

Amongst the entire emotional problem, anger is the most dangerous as the CRPF personnel always carry sophisticated weapons having potentiality to kill many within seconds. Paul Ekman also opines that anger is the most dangerous emotion, some of the main problems destroying society these days involves anger run amok. It is the least adaptive emotion now because it mobilizes us to fight our emotions when we did not have the technology to act so powerfully on them. In prehistoric times, when you had an instantaneous rage and for a second wanted to kill someone, you could not do it very easily but now you can do it very easily.

It is generally speculated within the organization that for most of the emotional problems perhaps many of the departmental policies are responsible, whereas the department has many welfare schemes aimed at taking care of the aspect of CRPF person's life. Notwithstanding, all the concern and care taken by CRPF leadership the junior functionaries are not able to cope up with these emotional problems. Thus it seems that there is something wrong in the behavioural pattern of organization's personnel, which needs to be deeply probed into and analysed. It is common that we unconsciously imitate the emotions we see displayed by someone else, through an out of awareness may be mimicry of their facial expression, gestures, tone of the voice and other non-verbal markers of emotion. Through this imitation people recreates in themselves the mood of the people. When two people interact, the direction of mood transfer is from the one who is more forceful in expressing feelings to the one who is more passive. Such phenomena might be spreading the emotional problems from one CRPF personnel to another in the organization.

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CHILD TRAFFICKING – A HUMAN RIGHT ABUSE*

Dr. Deepti Shrivastava**

Child trafficking flourishes in the dark gloom of poverty, distraction, inequity, corruption, scuttle hopes and broken dreams, deceit, trickery, violence, political conflict and criminality. The victim may be female or male, child or adult, any race or ethnicity and from any country in any region of the world. Poverty and the lack of monetary prospects endow a with fruitful ground for traffickers. Over and over again the families of victims are misleading, but sometimes a family member is complicit in the victim's fate. In other places where the financial system has shrunken, education creates false impression of opportunities abroad. The temptation for better life, crises in the home, and the low value placed on women and children can push many towards a waiting traffickers.

The nation's children are an extremely significant asset. Their look-after and concern are our accountability. Children's programme should find outstanding element in our countrywide strategy for the growth of human resources, so that our children are nurtured up to turn into full-bodied resident, bodily fit, psychologically alert and morally healthy, gifted with the talent and inspirations endowed with society. Equal prospects for progress to all children throughout the phase of development should be our aim, for this would serve our larger purpose of reducing dissimilarity and bring social justice.

But unfortunately in India, the world's largest democracy with a population of over a billion, 400 million of which are children, we are unable to protect the childrens, right. Conservative estimates state that around 300,000 children in India are engaged in commercial sex. Child prostitution is socially acceptable in some sections of the Indian society through the practice of Devadasi system. Young girls from socially disadvantaged communities are given to the ' gods' and they become a religious prostitute. Devadasi system is banned by the Prohibition of Dedication Act of 1982. Even today this system is prevalent in Andhra Pradesh, Karnataka, Tamil

Keywords

Child,

Trafficking,

Human Rights,

Child prostitution,

Sex workers,

Practice of Devadasi.

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Abstract

The nation's children are an extremely significant asset. Their look after and concern are our accountability. Children's programme should find outstanding element in our countrywide strategy for the growth of human resources, thus that our children nurture up to turn into full-bodied resident, bodily fit, psychologically alert and morally healthy, gifted with the talent and inspirations endowed

Nadu, Kerala, Maharashtra, Orissa, Uttar Pradesh and Assam. *(Kavitha P. Das 2006).*

Child trafficking is one of the worst forms of human rights violations. It affects millions of children worldwide. The United Nations estimates suggest that globally trafficking in women and children is an operation worth $10 billion annually *(SA VE 2004).*

Much has been said about the root causes of trafficking, poverty, discrimination particularly against girl child. The consequences of trafficking are extremely damaging for the child, inflicting physical injuries or causing psychological problems. She may be infected with AIDS and have an unwanted pregnancy. Affliction by cognitive and adjustment problems, and the presence of compartmental disturbances are the consequences leading to a lifetime's sentence of marginality.(*Child trafficking: 2001).*

Objectives

Keeping in view the above scenario, this paper covers mainly following areas :-

1. Nature and extent of the problem;
2. Causational factors working behind trafficking;
3. Human right abuse as a consequence;
4. Remedial measures and
5. Normative provisions.

Methodology

Data collection is a great challenge regarding this subject. Locating respondents, especially traffickers, was another difficult task. That's why this paper is mainly based on secondary data and mostly throws light on human right abuse of trafficked children.

Definition of key terms

Broadly, in the title "Child Trafficking – A Human Right Abuse" three terms need clarification. The first term "child" refers to any person less than eighteen years of age. Secondly, trafficking means "Child trafficking is the movement of children from place to place through force, coercion or deception into situations of economic and sexual exploitation". Lastly the term "Human rights" may be defined as the rights relating to liberty, equality and dignity of the individual guaranteed by the Indian Constitution as embodied in the Fundamental Rights and the International Covenants.

Nature and extent of the problem

Child trafficking is a massive human rights abuse which is known

to affect many children worldwide. It concerns the business of taking children away from their families, transporting them elsewhere, often across frontiers and even to other continents, to be used by others usually to make money. Child Trafficking is a very profitable trade. Children can be exploited over and over again. Those trafficking children often go unpunished because of lack of adequate law to prevent such activity, while trafficked children are often dealt with severely as illegal migrant workers.

The magnitude of this modern-day slavery is difficult to calculate. According to U.S. Government data on transnational trafficking 2004, of the estimated 600,000 to 800,000 men, women and children trafficked across international borders each year approximately 80 percent are women and girls and up to 50 percent minors. The data also showed that the majority of transnational victims are trafficked for commercial sexual exploitation. The number of individuals who are trafficked within their own countries would add significantly to these figures. *(USAID 2006).*

The First Director of the ILO, Albert Thomas, said the exploitation of childhood constitutes the evil, the most hideous, the most unbearable to the human heart..." (*I LO 2002).*

The scale of the phenomenon is difficult to judge. The 'trade' is secretive, the women are silenced, the traffickers are dangerous and not many agencies are counting *(Donna.* M. *2000).* Inconsistently child prostitution is an extraordinary and accute case of child labour and it increase further disturbing ethical troubles than child labour in common.

In a vast country like India, there are many and varied ways of employing trafficked children. They are exploited in industry and farming, in brothels and households, forced to work as smugglers and beggars, or sold as camel jockeys in Arab countries. Commercial matchmakers need the girls to keep their agencies going. Bonded labour is widespread in India. Children have to work off the loans of their parents and often spend years of their lives in near slavery. Another Indian speciality is religious prostitution. Young girls are married to a local goddess and have to be sexually available to men in the temple.

Many surveys have been conducted to find out the extent of child prostitution. Throughout the world, trafficking flows from poorer countries and regions to richer countries and regions *(Recovering childhoods2005).* In India 70% of women are forced into prostitution

with society. Equivalent prospects for progress to all children throughout the phase of development should be our aim, for this would serve our larger purpose of reducing dissimilarity and bring social justice.

The Constitution of India, the National Policy for Children, many other policies and legislations accord priority to children's needs. The Government of India ratified the Convention on

the Rights of the Child on 2nd December, 1992. Accordingly, the Government is taking action to review the National and State legislation and bring it in line with the provisions of the Convention.

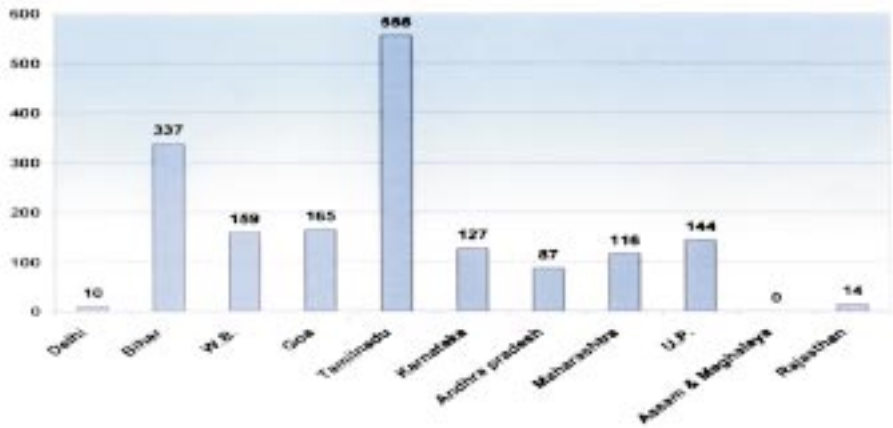
and 20% of these are child prostitutes *(Sarika Misha1987).*

Each year, 700,000 to 2,000,000 women and children are trafficked globally. Of the 45,000 to 50,000 that are brought to the U.S., 30,000 come from Asia, 10,000 from Latin America and 5,000 from other regions e.g., the former Soviet Union. The primary Asian source countries to the U.S. are China, Thailand and Vietnam (Foo, Lora Jo. 2002). Although trafficking into the U.S. and Europe has gained a lot of attention in recent years, anti-trafficking advocates in Asia have been addressing these issues on the continent for decades. This modern-day form of slavery has become a global industry, with profits estimated to range from between $9 billion to $17 billion per year. (Firoza Chic Dabby 2007)

The U.S. State Department estimates that 200,000 people are trafficked into, within or through India annually *(Bureau of Democracy 2003)*. Within this figure, it is believed that only 10% of human trafficking in India is international, while almost 90% is inter-state. *(Asian Development Bank 2002).*

There are estimated to be over 900 000 sex workers in India. Approximately, 30% are believed to be children. Recent reports estimate that the number of children involved in prostitution is increasing at 8 to l0% per annum.

About 15% of the prostitutes in Mumbai (Bombay), Delhi, Madras, Calcutta, Hyderabad and Bangalore are children. It is estimated that 30% of the prostitutes in these six cities are less than 20 years of age. Nearly half of them became commercial sex



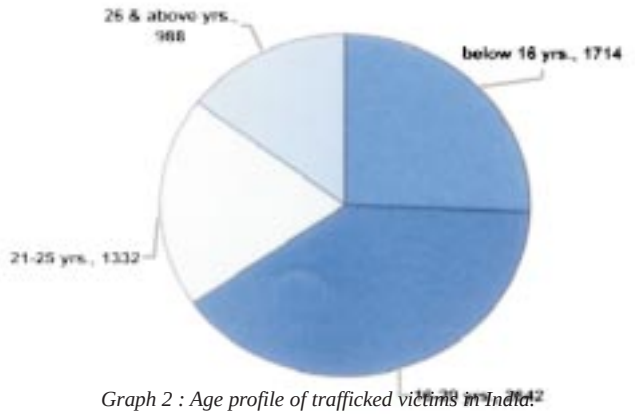
Graph 1: State wise Distribution of Child Trafficking in India

Source : NHRC - UNIFEM - ISS Project; A report on Trafficking in Women & Children in India: 2002-2003

workers when they were minors. Conservative estimates state that around 300 000 children in India are suffering from commercial sexual abuse, which includes working in pornography. (Teen *challenge* in *Lucknow 2007)*

The majority of trafficking in India, both trans-border and in country, happens for the purpose of commercial sex work, and over 60 percent of those trafficked into sex work are adolescent girls in the age-group of 12-16 years. (HIV/*AIDS Portal for Asia Pacific; 2006).* Girl child is particularly vulnerable to sex trade. More than 2.3 million girls and women are believed to be working in the sex industry within the country, and experts believe that more than 200,000 persons are trafficked into, within, or through the country annually.

According to a madam in Kamatipura, the average age of girls supplied to the brothels in the last two years



Graph 2 : Age profile of trafficked victims in India.

Source : NHRC report on traffifcking, 2002-2003

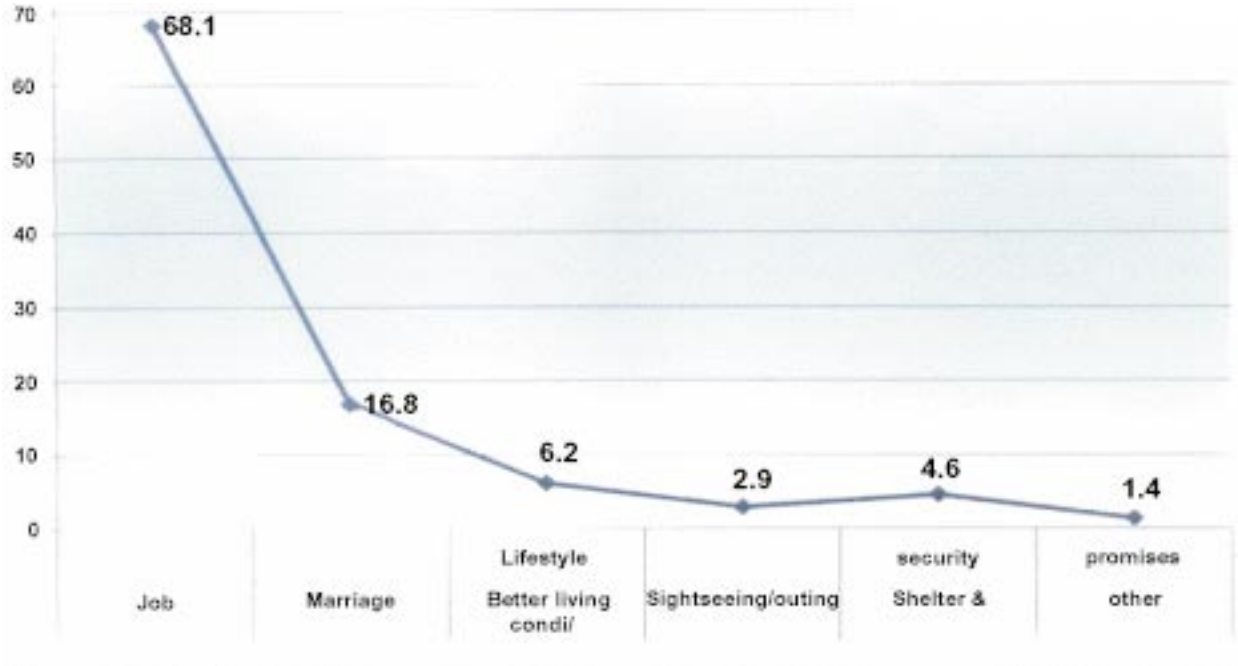
has decreased from 14 and 16 years to 10 and 14 years. A girl between 10 and 12 years fetches the highest price *(Teen challenge* in *Lucknow 2007).*

About 7000 sex workers cross over from Nepal into India every year. 66% of the girls are from families where the annual income is about Rs. 5000. They may be sold by their parents, deceived with promises of marriage or a lucrative job or kidnapped and sold to brothel owners. Between 40 -50% are believed to be under 18, the age of consent in India, some are as young as 9 or 10 years old. Child sex workers are not confined to big cities. A survey in Bihar revealed that roadside brothels for truck drivers in the Aurangabad and Sasaram Districts offered the services of sex workers aged between 6 and 18 *years.(Child prostitute* 2007).

Causational factors

The root causes of trafficking in children are multiple and complex. The root of child trafficking is poverty, as in many other nations, but also the low esteem in which women and girls are held and the breakdown of the societal foundation that might look after children. Other contributing factors include :

- In most developing countries today Globalization has severed the traditional socio-economic relations and the growth of tourism has rendered women and children vulnerable.
- It is estimated in a study report that 35% of the total number of girls and women trafficked to India have been abducted under the pretext of false marriage or good jobs.
- Besides this, clear causal factors include India's rapidly growing population (now over 1.028 billion) poverty and unemployment (or underemployment) of parents, illiteracy, and lack of access to formal education.
- Other factors contributing to child trafficking are : an increasing rate of unsafe migration, weak law enforcement, ill-treatment and physical abuse, alcoholism, lack of food, and forced marriages.
- The demand for cheap labour drives trafficking and the supply factors include: poverty and the desire to earn a living or help support the family, lack of education and schools, cultural attitudes toward children and girls in particular and inadequate local laws and regulations.



Graph 3 : Promises made by traffickers.
Source : NHRC report on traffifcking, 2002-2003

Parents and family members are also deceived by false promises and deception. In several areas, this is seen as a viable survival strategy for poor families, and therefore they do not support prosecution nor acknowledge the level of harm caused to victims or the community. Poor households in debt or struggling with insecure livelihoods may be compelled to hand over a child into debt bondage or allow them to migrate by themselves.

Human right abuse as a consequence

Human rights apply to all age groups, children have the same general human rights as adults. But children are particularly vulnerable and so they also have particular rights that recognize their special need for protection. Human rights are those rights which are essential to live as human beings — basic standards without which people cannot survive and develop in dignity. They are inherent to the human person, inalienable and universal. As part of the framework of human rights law, all human rights are indivisible, interrelated and interdependent. Understanding this framework is important to promoting, protecting and realizing children's rights because the Convention on the Rights of the Child — and the rights and duties contained in it — are part of the framework.

Trafficking clearly violates the fundamental right to lead a life with dignity. It also violates the right to health and health care, right to liberty and security of person, right to freedom from torture, violence, cruelty or degrading treatment. It violates all these rights to children who have been trafficked, or victims of child marriages their right to education. Besides, it violates the right to employment and the right of self determination. (NHRC 2 w.f. 3).

Universal education might seem a relatively straightforward goal but it has proven as difficult as any

to achieve. Decades after decades commitments and reaffirmations of those commitments have been made to ensure a quality education for every child. Some 117 million children — among them 62 million girls — are still denied this right. Despite thousands of successful projects in countries around the globe, gender parity in education — in access to school, successful achievement and completion — is as elusive as ever and girls continue to systematically lose out on the benefits that an education affords.

Trafficking of child for coerced prostitution is an abuse of human rights, not least the right to bodily and psychological integrity. It violets the rights of children to liberty and safety of human being and may even abuse their right to life. It renders children to a sequence of human rights abuses at the hands of traffickers and of those who buy their services. It also causes them to be helpless to be abused by governments which fail to protect the human rights of trafficked children.

The trafficking of children for the reason of coerced prostitution is an extensive and organized violation of the human rights of children. In the process of trafficking, children may be kidnapped, illegally disadvantaged of their freedom. Article 32 of the CRC stipulates the "right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health — physical, mental, spiritual, moral or social development". Articles 9, 10 and 11 also have provisions for illicit movement of the child, Article 34 calls on States Parties 'to protect the child from all forms of sexual exploitation and sexual abuse...[including] the inducement or coercion of a child to engage in prostitution or other unlawful sexual practices', and Article 35 aims to protect children from being treated as chattels.

Since 1999, the ILO's work against child trafficking has been reinforced by the adoption of the ILO Worst Forms of Child Labour Convention (No. 182). It confirms that child trafficking is a practice similar to slavery, and belongs to the same category as forced labour. Convention 182 urges countries to both prohibit and eliminate trafficking of children (under 18 years of age).

Trafficked children are exposed to other human rights abuses as well. Millions have no access to education, work long hours under hazardous conditions, are forced to become sex workers, or suffer in brothels or hotels where they endure inhumane conditions and daily assault on their dignity.

The year 2005 marks the fifteenth year of the entry into force of the Convention on the Rights of the Child, the landmark treaty that guarantees children the right to be free from discrimination, to be protected in armed conflicts, to be protected from torture and cruel, inhuman, or disregarding treatment or punishment, to be free from arbitrary deprivation of liberty, to receive age-appropriate treatment in the justice system, and to be free from economic exploitation and other abuses, among other rights. Achieving these rights remains a challenge. Governments must take stronger action to implement the convention's provisions and fulfill their promises to the children of the world.

Law, Policy Reform and Remedies

Although there has been progress on the legal front in recent years, there remains problems relating to the enforcement of laws in many countries.

SAARC Convention on Trafficking

In the last five years, there has been some important steps taken to address the issue of trafficking at a regional level. Presently, certain international conventions are being invoked to address the rights of children and their labour in hazardous sectors within the region, many of

these sectors include sites to which girls and children are trafficked. At the same time, regional instruments are being put in place (the Rawalpindi Resolution of 1996 and the SAARC Draft Convention of Trafficking of Women and Children) to specifically address the problem of trafficking.

At the global level, UNICEF advocates for ratification and enforcement of international laws that protect children, such as the International Labour Organization's (ILO) Convention No.182 that prohibits the worst forms of child labour, the protocol to prevent, suppress and punish trafficking in persons especially women and children, and the protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography.

An Optional Protocol to the CRC, on the Sale of Children, Child Prostitution and Child Pornography (2000), which entered into effect in January 2002, explicitly relates to the prostitution and trafficking of children, although it does not attempt to define trafficking further.

ILO Worst Forms of Child Labour Convention (No. 182) and Recommendation (No. 190). Since 1999, the ILO's work against child trafficking has been reinforced by the adoption of the ILO Worst Forms of Child Labour Convention (No. 182). This declares child trafficking to be unacceptable in all countries regardless of their level of development, and calls for its elimination without further delay.

The 2000 United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children supplement the Convention against Transnational Organized Crime and focuses specifically on trafficking in persons. The Protocol defines trafficking in persons for the first time in a legal document. It includes the criminalization of trafficking, the assistance to and protection of victims of trafficking, the consideration of states to adopt measures that permit victims to remain in the receiving state's territory and/or the repatriation of victims to their home country, as well as provisions for improving border controls and the integrity and security of identity documents. Its prevention measures include research, public awareness campaigns, and social and economic initiatives to prevent and combat trafficking.

The 2000 United Nations Convention against Transnational Organized Crime came into force in 2003. It is the first international instrument against transnational organized crime. Its purpose is to promote international police and judicial cooperation and to prevent and combat transnational organized crimes. It does not speak specifically to trafficking in persons; however, it does offer for the victim and witness protection and mutual legal assistance.

The National focal point for combating trafficking in women and children in India at theNational level is the Department of Women and Child Development (DWCD) of the Ministry of Human Resource Development. DWCD has counterpart focal points in each State government.

In pursuance of the Supreme Court directives of 1990, the Government of India constituted a Central Advisory Committee on Child Prostitution in 1994, comprising of government and nongovernmental agencies to examine the policy and programme interventions. A desk has been set up in the Department of Women and Child Development to implement the recommendations of the Advisory Committee. In 1997, under the directive of the Supreme Court, a Committee on Prostitution, Child Prostitution and Children of Prostitutes has been established, headed by the Secretary of the DWCD. This Committee looks into the problems of prostitution and trafficking of women and children in

order to evolve suitable programms. In August 2001, a meeting of this Committee was held.

Remedies

Problems may be controlled through both legislative and social sanctions, and this must be balanced by strategies to reduce child trafficking. In the mean time, trafficking survivors require appropriate and timely services, and society needs to recognize and accommodate their special needs.

New Supportive Attitude of Society

Children's exploitation mainly depends on society's attitude. Society has to change its attitude and have to adopt a new supportive attitude so that trafficked children may come in mainstream of society. Those who are well to do in society, should come forward to take the responsibility of looking after the poorer children and their basic needs. If every prosperous family takes over the responsibility of one or two poor children, their parents will not sell their children in trafficker's hand.

Vocational Education

Poverty is the major cause of child trafficking. Due to lack of proper employment, parents and their children are ready to leave their native place. Temptation of easy money and desire to enjoy a good life style push them in illicit activities. Government should provide vocational education at school level especially for poor children so that when they complete their school education, they can earn money to fulfill their basic needs.

Role of Family

In organizing a social system, family has an important role to play. It is the place where the socialization of children gets started. It is essential that right social values are inculcated from childhood. In addition, it is recommended that particular involvement be explored and planned for children in the trafficking prone areas and in the territorial towns to raise their awareness and participate in anti trafficking tricks.

Sex Education

An effective sex education should also be provided in its best form in the home itself. A child can learn a lot from their parents, e.g. instruction or caution regarding personal sex habits : In schools, best results are obtained through studying lessons in biological sciences where general knowledge about sex, human physiology and the reproduction process provides a balanced basis for the social problems of sex and lends a moral content to human sexuality.

Sensitization

The adult members of the society and children should be sensitized to the danger of sex crimes and be made more aware of the possibilities of tricky incidents of trafficking. Such sensitization would help the children and their parents to take the minimum necessary precautionary steps and avoid carelessness on their part.

We have to do a lot of heart searching to minimize this problem, it is a joint effort. The main groups of professionals in society who work with child victims are: the police, prosecution, the magistrate, rescue home officials and the society. It is unfortunate that they seldom discuss ways and means in which their joint efforts might be undertaken to minimize this unbearable human right abuse.

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COURT MONITORING SYSTEM

Umesh Sharaf, IPS*

Introduction

The CMS is a system, which helps the police officials to monitor the court matters effectively. When an FIR is filed against the offender, it contains all the information. The information is updated as and when the investigation progresses and also when trial takes place. The police have to maintain all these files and reports. It is a time consuming process to go through. Now with the help of CMS all the information is available for the higher officials to monitor progress in pending trial cases.

The Vijayawada Commissionerate includes 18 police stations, which fall in the jurisdiction of 14 different courts with more than 8000 Pending Trial Cases. A total of 54 P.Cs were on court duties alone due to territorial as well as functional distribution of cases in various courts. The S.H.Os had almost no control over what was happening during trials. The cases especially in lower courts were at the mercy of the court P.Cs with no supervision over the work done by the P.Cs and no contact between the APPs, police officers and public.

A centralized court liaison room was prepared in the Suryaraopet police station, adjoining the court complex; logistics were made available for storing the PT case files, Court Monitoring System (CMS) briefing needs and so on. The process issued is polled centrally, stored and redistributed to various P.Cs and served process are collected centrally and redistributed to the court officers. Remand Extensions are sent by the concerned S.Is/C.Is well in time to the officers of the concerned court and unserved process through Rakshaks etc.

This system saves nearly 26 police men, as 14 ASIs and 14 PCs are present in all the 14 courts effectively. One SI is posted to the CMS and is called as SI, CMS.

All the standard forms required, like CCD, list of adjournment cases date wise, Police Station wise as well as court wise are developed. The basic data pertaining to the stage of the case, process status, and deposition of different witnesses are available online.

The CMS is connected to C.P. office through extended LAN that

Keywords :

Court monitoring system,

Centtralised liaison room,

CCD,

Crime number,

PT cases.

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Abstract

The classical system of representing the police during criminal trials is to have court constables representing the police station in the court of law. The court duty police personnel have monopoly over the court work and the system is prone to abuse. Because of territorial and functional distribution of work in different courts, it is also required for each police station to have several persons on

facilitates continuous supervision and guidance. This does away with the court PCs' monopoly over the P.T. cases and prevents the collusion of court P.Cs with Defence Counsel. This has led to a very high conviction rate now.

The CMS ensures the producing of the witnesses in advance and facilitating the prosecutor to brief the witnesses. It removes to some extent the psychological barrier of witnesses including fear and ignorance of Court proceedings.

The software is Windows 2000 based and facilitates extensive report generation and analysis. The scriptory work of the court PCs is done away with and all court C.Ds are generated by the system.

Project Objective

The purpose of the system is to streamline the information regarding pending trial cases and to provide various operational and management reports. There are many individuals associated with the case such as investigators, accused, witnesses etc. The system facilitates recording and monitoring their actions and statements. The supervisory ranks can monitor at any given point of time. CMS is responsible for recording and maintaining all these actions and statements, from filling of the charge sheet till the disposal of the case. Necessary statement/reports can be generated to assist the supervisory officer to monitor the performance of the subordinates.

Scope

Better monitoring of the Pending Trial Cases is required. Large number of police force was engaged in court matters, which had to be reduced. Conviction rate has increased, and the disposal of the pending trial cases is faster. In addition to the above all, there is a check need to the unopposed bail petitions.

Achievements in a nutshell after Implementing CMS from Jan 2005

- Court proceedings of any cases were monitored easily.
- Manpower has been reduced by nearly 50%. Now 28 policemen are enough to attend all these courts instead of the previous 54 policemen, which save nearly Rs. 2, 00,000/- every month.
- Trial cases are disposed faster and pendency is reduced because the system makes it convenient for the officials to monitor the process regularly. In the year 2004 the cases disposed were 3120 and in 2005 the cases disposed were 4249.
- As compared to the conviction

rate of 30% (overall) in 2004(the conviction rate in previous years was also of same standard), the conviction rate in 2005 was 58%, an increase of 28%.This increase in over all categories of crime and as can be seen, is improving every month since January 2005 and has crossed 60% in 2006.

- Bail petitions can be monitored with the help of CMS and this feature ensured that the bail petitions were opposed 100%.
- Alerts for applications for Remand extension and timely filing of charge-sheets are being informed to concerned I.O.s through SMSs by the System automatically every day.

Earlier Conventional Process

- The police personnel file an FIR against the offender. The FIR contains information such as, the time and date of offence, the details of the accused, the types of offences involved, the list of witnesses, the details of the investigation officer etc.
- The Investigation officers of the cases submit the case to the 1st class magistrate court and based on the type of crime involved, the case referred to the higher courts and these courts provide a "case number" and the date of the proceedings for the case is also given.
- The personnel of the police stations visit the witnesses' residence and inform them to be present in the court for the proceedings.
- The investigation officer and the witnesses are present at the court on the specified date. The prosecutor deals with the case.
- A report is prepared by the police personnel manually updating the proceedings such as the attendance of the investigation officer, the attendance of witnesses, number of witnesses examined, adjournment date (if any) etc.
- Various types of petitions/ memos are manually prepared by the prosecutors to the court for various types of actions required for the case.
- Various types of summons/ warrants are issued by the court to the related persons for a case.

Basic requirements for the new system

A. The case related details

1. Crime Number (FIR number)
2. Date and time of occurrence
3. Jurisdiction (Police Station name)
4. FIR date
5. Sections of law
6. People related to the case as described below
7. CC No./ PRS No./ SC No.

court duty. Therefore, a paradigm shift is required to improve the performance of police in the courts. Poor conviction rate has been a long standing concern. A new System was introduced in Vijayawada City Commissionerate of Andhra Pradesh in January 2005 which has more than doubled the conviction rate and also helped improve process service.

B. The people related to a case were :-

1. Complainant : Name and full address
2. Accused : Name and full address
3. Investigators : Name, designation and their posting
4. Liaison officer : Name and address, contact number
5. Prosecutor : Name, court name, contact number
6. Witnesses etc : Name and full address

C. The actions in the court were :-

1. Hearings
2. Adjournments
3. Petitions filed
4. Summons issued
5. Warrants issued
6. Dispositions etc.

These are the actions that could happen on a case. The system was built to track dates of these actions, what kind of action was taken on a given date, the reasons for these actions taken, and list of persons who took the actions such as a witness attended and was examined.

D. The actions related to the people could be:-

1. **Attendance/absence at hearing :** This information was necessary to identify the list of persons that are supposed to attend the court; number of persons that were absent/attended the court. The reasons for being absent also were identified.
2. **Change of address :** This information was necessary while issuance of letters/summons etc.
3. **Change of classification of witness/accused :** This information was necessary to track the list of witnesses/ accused that were examined and that have become PWs.
4. **Issuance of letters, warrants, summons :** The list and number of letters sent/summons served and the warrants issued to various persons on different dates identified and tracked.

All dates related to the above were tracked.

Statements generated were :-

1. Provide the list of cases for a given date, sorting by courts/prosecutors/police stations etc
2. Letters to people (witnesses, IO etc)
3. Summons served individually
4. Warrants issued
5. Petitions filed in the court
6. Summary reports that will be useful for management purposes, based on the jurisdiction of the officers.

The system needed information mentioned in points **A** and **B** as inputs and this information was extracted from PT case dockets that are present at the police stations and stored in the CMS system. The information under points **C** and **D** was entered in the CMS system. Various kinds of statements were generated as an end product based on the requirements.

Hardware used

- High configuration Server for PT cases information, database
- Computers for the data entry operators and police authorities for entering/viewing the information received
- Networking Components : LAN, Extended LAN
- UPS
- Power backup generator system

Software used

- System Platform : Windows 2000
- Software : Web based, GUI based
- Database : SQL server
- MIS Reports : Extensive report generation and analysis

Approach to the Project

The system was built in a phased manner.

Phase I :

1. Observed the court proceedings and identified the process that was being practiced. What was and also what should be ?
2. Conducted more in depth discussions with prosecutors/court constables/officers regarding the related issues that came up after the observation of the court proceedings.

Phase II :

1. Developed preliminary designs of the forms that are essential for the operations.
2. Developed preliminary designs of the basic reports that are essential for operations.
3. Developed specifications for management and monitoring reports. These were built after the system started working.
4. Time and manpower were planned to develop and implement the project.

Phase III :

1. Started building the system after the approval of the specifications and design.
2. Built the system to first enter the details of all the PT cases that were pending at all police stations.
3. Trained the data entry operators and interacted with the police personnel for data entry.
4. Presented a demonstration of the system to the police officials and prosecutors and made modifications as per their requirements.

Phase IV :

1. Provided Technical assistance on the requirement of hardware.
2. Installed and commissioned the system for real time functionality.
3. Tested the installed system for 2 months and made changes as per the practical "problems" that arose during the functionality.
4. Provided training to the police personnel (court constables, officers), data entry operators for utilizing the system.
5. Installed the final product after the 2 months of "real time testing" and the system started functioning from January 2005.

System Achievements in detail

The object and goal of the Court Monitoring System was to reduce the man power utilized earlier due to the introduction of this new project and to ensure speedy liquidation of Pending Trial cases. The earlier monopoly of court duty police personnel is totally abolished and the entire court work is being monitored at all levels, yielding to good results. Every day court work of each court is being monitored at CMS and whenever lapses are noticed, it is being informed to the concerned SHO. Earlier whenever docket order was made issuing summons/warrants./notices to sureties/ 82 and 83 Cr.P.C proceedings etc., the concerned court PC/HC/ASIs were lethargic in collecting process from the court and more over, it depended on his mercy, as result of which the entire process of trial in the court was affected at all stages. But now, as and when the courts pass orders, the C.M.S. collects it and sends it to the concerned Police for process on the same day.

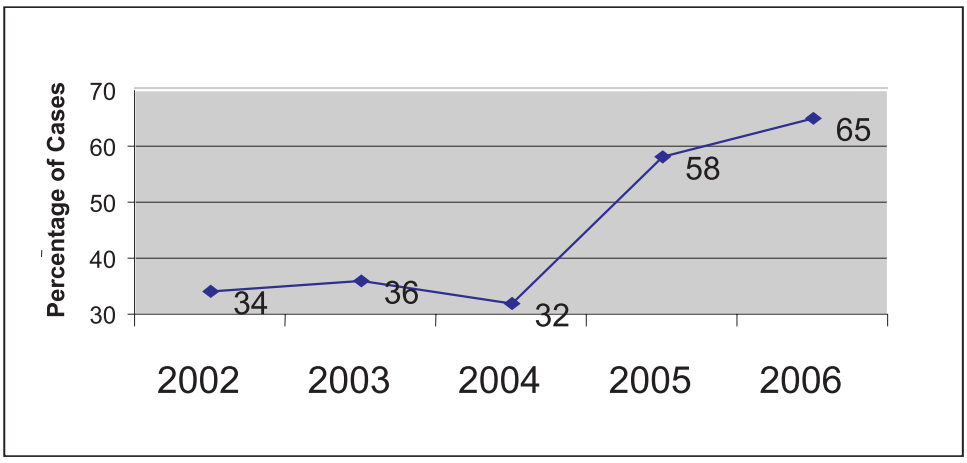
For example, collection of NBWs from all the court for the month of January, 2004 stood at 94, but after the formation of C.M.S., it was 365 for Jan 05 and 387 for Jan. 2006.

The same process is maintained in receiving and service of summons. For example, 3626 summons were received during the month of January 2005 out of which 1206 were served whereas 5169 summons were received

during the month of Jan 2006, of which 3382 were served.

A large number of process, which was hitherto shown pending in the court but was not physically issued was got issued. As a result, as compared to 20021 summons issued in 2004 as many as 48531 summons were got issued in 2005 and 43540 in 2006 till August. As compared to 16516 summons served during the year 2004, 32509 summons were served during the year 2005 and 26507 in 2006 till August. As compared to 1347 NBWs issued during the year 2004, 3402 NBWs were got issued during 2005 and 1595 in 2006 till August. As compared to 426 warrants executed in 2003 and 615 warrants were executed in 2004, 1096 warrants were executed during the year 2005 and 516 in 2006 till August. It is not an exaggeration that the courts are flooded with witnesses and accused. During the month of January'05, 1206 witnesses were produced before various courts. In September 2006, 3382 witnesses were produced before various courts. The presiding officers are not able to examine all the witnesses produced by the Police and are now not issuing process indiscriminately. Now, due to close supervision from C.M.S., all the I.Os are attending the courts. Previously, in any case whenever prosecution was closed due to non attendance of witnesses, the concerned was not bothered. Now it is clearly monitored and the witnesses are produced before the courts by filing 311 Cr.P.C. petitions to reopen the cases and for examination of such witnesses. Every week all the SIs and CIs visit the CMS for reconciliation of the process and PT cases.

Every week and month CMS submits reports with regard to the attendance of IOs to the courts, disposal of PT cases, service of summons, execution of NBWs, production of witnesses and seeks the instructions of the Commissioner of Police. The few IOs who fail to attend courts to give their evidence are being called for their explanation. The SMS alert system ensures timely filing of remand extensions and charge sheets well within the mandatory period. As a result, whereas in January 2005 684 cases had been under investigation for more than 2 years, by September 2006 this figure had dropped to just 3 cases (those too because of stays by the High Court). This system is now proposed to be replicated in other units across Andhra Pradesh.



Dramatic increase of conviction rate after introduction of CMS in January 2005.

A STUDY OF THE ABSENCE OF POSITIVE CORRELATES BETWEEN ETIOLOGY OF JUVENILE DELINQUENCY AND MODES OF TREATMENT TO JUVENILE DELINQUENTS IN INDIA

Prof. D.P. Saxena

Key Words

Etiology,

Juvenile Delinquency,

Positive Correlates,

Mode of Treatment,

Juvenile Delinquent.

With the advance of industrialization and urbanization, juvenile delinquency is emerging as a major problem in all the developing countries of the world. When a country is progressing, it generally means moving from agricultural to industrial economy. This is a period of upheaval the resulting urbanization, mobility and industrialization are hard on all specially the children. For instance in India a small village in Orissa was turned into a huge industrial city (Rourkela) with the start of a steel plant. Prosperity took over the whole area. As a result delinquency shot up from virtual zero to one of the highest rates in India. The metropolitan cities of India are also experiencing the gravity of this problem. In developing countries gang activities, purposeless offences, acts of vandalism, joy riding and the like, are on the increase. In these countries the hold of the family and religion is slowly but steadily giving way. Children are mislead by perverted psychology. The young ones are not trained and disciplined in a firm yet loving manner to respect parents, to respect the authority of schools, teachers, govt., officials and others in power and authority.

Further the break up of placid rural surroundings, "pull" of the cities, congestion in the city life, bad housing condition and uneven development of the family, death, desertion and divorce of one of the partners, poverty, slum, filth and squalor all have contributed to an unhealthy development of childhood in our country in recent years. It is but natural that delinquency would be the end result of such a social process. In India too, who are connected with juveniles, teachers, probation officers, social workers, juvenile court magistrates, policemen are all unhappily aware of youth situation today.

From the above discussion it is quite clear that juvenile delinquency is a complex problem and any simple generalization about the cause or causes is not easily possible. Further the innumerable causes are so mixed and over-

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Abstract

As per Children Act the police officer informs the name, home address and other details about the delinquent child immediately. to the Probation Officer. The Probation officer conducts an indepth observation and diagnosis through social investigation (social, psychological, economic and cultural back-ground of the delinquent child) He prepares a comprehensive report compris-

lapping that it is very difficult to locate any set of causes successfully in case of each of the juvenile delinquent. This problem in the causation of juvenile delinquency has been well indicated by some criminologists. Bogardus says "when the mother goes out day after day whether to work or play bridge, the home may go to pieces and the children may go astray". Another eminent scholar in this field Neumeyer aptly remarks, "With the father on a night shift and mother on the day shift or both on day or night shifts children were generally on the street shift". Further Elliott & Merrill have stated, "a bad home plus bad neighbourhood, plus a poor educational back ground plus bad companions do not produce delinquents. Rather from the bad home situated in a bad neighbourhood a handicapped child goes forth in to the crowded city streets for his recreational activities, meets up with bad companions and is educated in a particular variety of misconduct"

Absence of positive correlates between Etiology of Juvenile Delinquency and Modes of Treatment

For the innumerable causes of juvenile delinquency and its various combinations and sets, we in India have been able so far to evolve seven possible modes of treatment to juvenile delinquents but failed to determine positive ready made tested correlates in between different sets of etiology of juvenile delinquency and the most suitable relative mode of treatment, for the final decision to the juvenile court magistrates in India.

In this respect, although we have borrowed various scientific terms like "Observation" "Diagnosis", "Prescription" and "Treatment" from the Medical Science with a view to frame positive correlates between etiology of juvenile delinquency. and treatment of juvenile delinquent, Yet there is hardly any scientific technique *in the social science* equivalent to X-ray scanning, Ultrasound and various chemical and technical tests etc. in Clinical Science except the only one : CASE STUDY METHOD to have a thorough and in depth observation and diagnosis of individual cases of Juvenile delinquents and prepare a total case history of each such case of delinquent child. Ultimately the final investigation report so prepared contains "the total life situation", social, economic, psychological and cultural background of each juvenile delinquent. In this report we find enumeration of different causes, their different combination of sets

relative to the individual juvenile delinquents and also recommendation of a suitable mode of treatment and rehabilitation out of the total seven modes of treatment so far in juvenile courts. Further, this final investigation report is based on the combined observation and diagnosis of probation officer, Remand Home Supdt. and case worker to be submitted to the juvenile court magistrate for consideration and passing final orders about the committal of the juvenile delinquent to either of any seven modes of treatment such as:

(i) Restored to parents unconditionally

(ii) Discharge and Acquittal

(iii) Released on admonition

(iv) Released on probation

(v) Entrusted to fit persons

(vi) Sent to a correctional institution

(vii) Disposed off otherwise by the Magistrate for complete correction and rehabilitation of Juvenile delinquents. As no well tested reliable and readymade positive correlates to the different modes of treatment to the juvenile delinquents is available with the Juvenile court magistrate, he is compelled to exercise his own discretion in passing final orders about a suitable mode of treatment on a trial or error basis which may prove both right or wrong.

Here, also lies four possible dangers worth mentioning. These are :-

(1) The case study method comprising of detailed observation and diagnosis, itself suffers from certain weakness against which a caution is very much needed to them who administer it.

(2) The probation officer, sase worker and Remand Home Supdt. etc. who are chiefly connected with the observation and diagnosis work in respect of juvenile delinquents are also amenable to commit many errors in their work either because of their ignorance about the weak aspects of the method or due to lack of the requisite skills, training and ability.

(3) there is every probability of making vague recommendation in the investigation report by the probation officer and others for the line of treatment of juvenile delinquent.

(4) There is also possibility of a wrongful decision by judicial court magistrate in the committal of the delinquent to an institutional mode of treatment and correction.

ing of all possible causal factors as well as his recommendations for a suitable mode of treatment. The other juvenile officers like Remand/Observation Homes Supdt. also carry out close observation and diagnosis of the juvenile delinquent. All furnish before the juvenile court magistrate their own prognosis, diagnosis, as well as recommendation for a suitable mode of treatment. Now the juvenile court magistrate faces the problem of

non-availability of positive correlates between etiology and modes of successful treatment, as he is left with no option but to exercise his discretion in awarding the committal of the delinquent child to a suitable mode of treatment which may or may not prove effective.

ABSENCE OF POSITIVE CORRELATES BETWEEN ETIOLOGY OF JUVENILE DELINQUENCY AND MODES OF TREATMENT OF JUVENILE DELINQUENTS

ETIOLOGY OF JUVENILE DELINQUENCY			ABSENCE OF POSITIVE CORRELATES	MODES OF TREAT MENT
	SETS OR COMBINATIONS 1. a,b,c,d			1. RESTORED TO PARENTS UNCONDITIONALLY
	2. a,b,c,d,e,I			2. DISCHARGE OF ACQUTTAL
Influences at Home 1. SOCIAL CAUSES	3. a,b,c,d,e,f,g,h,I,j			3. RELEASED ON ADMONITION
	4. a,b,c,d,e,f,			4. RELEASED ON PROBATION
	5. a,b			5. ENTRUSTED TO FIT PERSONS
	INFLUENCES OUT SIDE HOMES a,b,c,d,e,f			6. SENT TO CORRECTIONAL INSTITUTION
2. INDIVIDUAL CAUSES	PHYSIOLOGICAL a,b,c,d			7. DISPOSED OFF OTHERWISE
	PERSONAL & MENTAL a,b,c			
	PERSONALITY TRAITS a,b,c,d,e			

Reasons for not having Positive Correlates to modes of Treatment to the Juvenile Delinquent

1. As a rule as soon as the child is arrested or bailed out, the police officer should immediately inform the probation officer of the area, the name and address of the parents and other details of the delinquent child to enable him to initiate the social investigation as early as possible. Generally such information does not reach the probation officer in many cases immediately. Some time probation officer comes to know about bailed out child delinquent only on the day of hearing in the court and this delay makes a thorough social inquiry impossible for probation officer and to suggest a suitable recommendation of treatment.
2. There is a great dearth of Observation and Diagnostic facilities to the juvenile delinquents because of the small number of Remand Observation Homes, classification centres and probation officers etc.
3. Further so far there is no such practice of getting all juvenile delinquents committed by the court to a centre of classification unit or Remand/Observation

Home which may be equipped with adequate facilities for scientific observation and diagnosis with a team of probation officer, case worker, doctors, psychologist, and an educationist and a craft teacher. Only then some positive correlates can be evolved and determined.

Major Suggestions for Deveploping Positive Correlates between Etiology and Mode of Treatment

1. There is a need for organizing a Workshop of coordinated team of sociologists, social workers, psychologists, doctors, probation officers and juvenile court magistrates. The main responsibly of this team of experts should be the preparation of as many as possible sets or combinations of etiology of juvenile delinquency along with the proposal for the most suitable relative mode of treatment of juvenile delinquents. After sufficient research and long experiments and teasting different models, This team of experts can gradually bring out well tested models of set causes and suitable modes of treatment against different sets of etiology of juvenile delinquency.
2. A juvenile court magistrate has to be a very mature and knowledgeable person deeply concerned with the problems that afflict youngsters and capable of adjusting his or her role according to the needs of the different children appearing before him. It is necessary or rather inevitable to organize special training courses for juvenile court magistrates in every State.
3. The institutional services under the Children Acts such as a Remand Homes, Observation Homes, Special Schools, BORSTAL Schools etc. are still in a developing stage in our country and unless special care is taken to lay down minimum standard the delinquent children are not likely to be properly observed, diagnosed and proper treatment given for their rehabilitation and lack of facilities.
4. Lastly no legislation for children per se ever take the place of the family and the home. The emphasis should be less and less on enacting new laws and more on introducing suitable measures as distinct from legal, for bringing about the necessary adjustment, replacement and substitution etc. in the institutional frame work of the society in the light of modern social forces of industrialization and modernization.

Conclusion

The problem of juvenile delinquency though recently enlarged in magnitude is not insoluble and there is no opportunity for any guess work procedure in the observation and diagnosis of the total life situation of the juvenile delinquents with genuine concern, enlightened public opinion, organized social action and increasing research, scientific handling of youth problem within reach. The problem, therefore deserves close attention of the administrators, legislators, social scientists, correctional workers and community at large.

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BOOK REVIEW

Children of Women Prisoners in Indian Jails , By Prof. **B. N. Chattoraj**, published by LNJN National Institute of Criminology & Forensic Science, Ministry of Home Affairs, Government of India, Year of Publication : 2006, Pages : 257, Price : Rs. 600/-

The book under review entitled "Children of Women Prisoners in Indian Jails", authored by Prof B. N. Chattoraj is couched in simple and lucid language. It covers a specific area of national importance. It is a well researched work with the latest statistical support, analyses the issue in a systematic manner. The book reflects the rich and varied experiences and deep knowledge of the author in the area concerned.

The topic undertaken has been unexplored and demanding in the criminological arena, and shows the concern of the writer for the helpless and hapless children languishing in Indian jails without committing any crime. The author, in this study, has taken painstaking responsibility to explore those compelling forces that generate social deviance among the children. The book has been presented in a very illuminating manner.

The Research Study has unique importance because public mind, in fact, had stirred only after the publication of some portion of its findings in the national newspapers. Thereafter, a number of Public Interest Litigations were filed in the Supreme Court of India, showing serious concern for the children who are lodged in Indian jails with their mother prisoners for years. Recently, in a case, R.D. Upadhyay vs. State of Andhra Pradesh and others, 2006 (4) SCALE, the Supreme Court has observed that "Children, for none of their fault, but per force have to stay in jails with their mothers. In some cases, it may be because of the tender age of the child, while in other cases, it may be because there is no one at home to look after them or to take care of them in the absence of the mother. The jail environments are certainly not congenial for development of the children."

In the light of various documents and reports including the report of the Study undertaken by Professor Chattoraj in the National Institute of Criminology and Forensic Science, a set of guidelines for proper upkeeping of children of women prisoners languishing in Indian Jails was issued to different State Governments and Union Territories for compliance. The suggestions offered in this study were very well reflected in those guidelines that further echoed the importance of the book.

The present study has unraveled the living conditions of those children languishing in jails at a pragmatic level, the problems faced by mother prisoners and their children have been brought out explicitly, and possible measures have been suggested. It has also indicated many areas on which further studies may be undertaken.

After fifty nine years of Independence, about one third of our population is living under below poverty line. It shows that the wishes of our freedom fighters and the democracy have not fulfilled. The study has unearthed the truth that children under study generally belong to rural and deprived families. The fact is that the most popular system of governance as we have, has failed in delivering justice to the children living behind the bars. They are characterized by diverse forms of deprivations, the most important one being loss of freedom and complete seclusion from a normal family environment. The children are forced by the circumstances to live in a criminologenic environment which they did not deserve. Besides, the condition of women prisoners in Indian jails is very distressful. They

are suffering from many disadvantages, and female wards are mostly over populated. Even adequate clothing and toilet facilities are not available to them in many jails. Health care of women prisoners in many prisons are not up to the mark. The basic facilities for education, vocational training and recreational facilities are also very limited. Their rehabilitation prospects are also very bleak.

It is probably the first study of its kind on this issue, on all India basis covering the states viz., Delhi, Rajasthan, Punjab, Maharashtra, Tamilnadu, West Bengal, Uttar Pradesh, Bihar, Madhya Pradesh, Mizoram and Andhra Pradesh. The study has been divided into two parts. In the first part, magnitude and important identification data in respect of all the children living with their mothers in the jails from all over the country have been collected and analyzed. In the second part, 25 jails consisting of 8 Central Jails, 4 Women Jails, 8 District Jails and 5 Sub Jails have been selected from the above mentioned Indian States.

The study is of utmost importance because of its theme which is not only important for the social and moral point of views, but also it is related to the future citizens of India. In view of the living condition in the jails of the country and their incapability of protecting a child from moral and social danger, there cannot be any justification to keep a child in a prison under any circumstance, whatsoever. Sigmund Freud, a famous psychologist has rightly said that the first five years are the milestone in the total development of a child. In the initial five years if a young child is nurtured with the water of confinement and soil of criminality and no manure of family environment, the fruits and flowers of delinquency and deviant behaviour tend to grow in him. The children who are living with their mothers in jails do not have any contact with their relatives, friends, other children, animals, traffic, roads and nothing else except high walls and suspected or convicted persons around. Under these circumstances mental growth and development of their social relationship tend to be affected adversely.

The strenuous efforts made by the Scriber and Research Team comprising Dr. N.N. Mishra, D. A. Chandel, Dr. (Mrs.) Shobha Vijender, Miss Moushmi Gangopadhyay and Shri Jisu Patnaik, reflect in this study in the form of a comprehensive report having seventy six tables, detailed review of literature, relevant annexure, sufficient references and elaborated suggestions etc. The book has been divided into two parts and twelve chapters, which deals with various facets of the issue concerned, has exhaustive list of tables spread into related chapters. The view points of various stake holders such as mother-prisoners, experts, jail officials etc. have also been taken very expressively.

The book falls undoubtedly, in the category of a land mark study in the field of criminology. The reviewer happily recommends this book which would be useful for the students, teachers, trainers, prison administrators, judges, policy makers and others concerned for the welfare of children.

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L.N.J.N. National Institute of Criminology
and Forensic Science,
Ministory of Home Affairs Govt. of India

FROM THE DESK OF DIRECTOR (R&D), BPR&D

(CORRECTIONAL ADMINISTRATION DIVISION)

The Computer and Information Technology has become user friendly in 21st century, especially in libraries which brings a wealth of information/knowledge resources for modernization of police and prison departments, including their training institutions etc.

National Informatics Centre (NIC), Department of Information and Technology, Government of India designed and developed *e-Granthalaya* (a digital agenda for library automation and networking) version 2.0 packed to promote information technology for library management and all requirements to maximize functions of Indian libraries, including police and prison libraries in India. The NIC, New Delhi has offered this software free of cost to the government libraries and also to impart training to the library professionals on its operation.

Bureau of Police Research & Development (BPR&D), being a nodal agency at the national level in police as well as prison matters, introduced this software to all the DGs/IGs Police and Prisons of all States and UTs, Heads of the Police and Prison Training Institutions, and Heads of the CPOs after examining its relevance in modernizing police and prison libraries.

Motivated by the encouraging response from the States, the NIC has proposed to organize three days' training programme to the library professional of police and prison libraries free of cost to implement the software in their libraries properly. Accordingly, two training programmes for library professionals were organized at National Informatics Centre, A-Block, CGO Complex, Lodhi Road, New Delhi 110 003 on December 27-29, 2006 and January 3-5, 2007 in collaboration with the BPR&D. The first course was inaugurated by Dr. B. K. Gairola, DG, NIC, New Delhi and the second course was inaugurated by Sh. R. C. Arora, Director, BPR&D, New Delhi. In these training programmes 67 officers attached to prison and police libraries attended these programmes. Dr. B. V. Trivedi, Assistant Director, BPR&D, as a coordinator of these programmes has taken feedback from the participants in the presence of Sh. M. Moni, Deputy Director General, NIC and Mr. P. K. Upadhayay, Officer-Incharge, Library and Information Division, NIC on the content of these programmes and its methodology.

In view of the excellent feedback received from the participants of the two three days' training programmes, BPR&D has requested the NIC to have such collaboration in future also to impart training for rest of library staff either in NIC Headquarters, New Delhi, State Capitals or Training Institutions wherever such facilities are available.

At the end of these programmes, NIC made certain observations and recommendations indicating the future action plan with a concluding remark which are given as under:-

OBSERVATIONS

1. Most of the participants were not well trained for computers use and hence "General Awareness Computer Training" is required;
2. Most of the participants did not have computer facility in their respective libraries, therefore, it is recommended to provide at least the following infrastructure in the library:-
   (a) One Server PC with Windows Server 2000/2003 with MS SQL Server (Standard Edition);
   (b) One Client PC for data entry;
   (c) One Client PC for Library users for accessing the library catalogues within the library;
   (d) One small printer;
   (e) LAN Switch / wire for connecting the Client PCs and Server PCs (in case LAN is available in the organization, — then library PCS must also be connected over this LAN);
   (f) UPS for power supply.
3. Most of the participants were not library professionals and hence they were not quick in understanding of the software functions;
4. Many of the libraries are being headed/looked after by the non-library professionals—hence proper development / functioning of the library activities and user services were not being given;
5. No adequate library staff available for data entry job;
6. No library supporting staff available in the library; and
7. Frequent transfer of the library staff.

RECOMMENDATIONS

1. Provide required infrastructure (PCs, Printer, Power supply, LAN, Backup devices, etc. may be provided to the library);
2. Adequate library professionals and supporting staff for managing the library activities and user service properly may be deputed;
3. Depute library support staff (Library attendant, peon etc.) in the library;
4. The staff posted in the library should be given reasonably long period as frequent transfer is not healthy for the development of the library services;
5. In case library collection is more that 5000 in a library—the data entry job can be outsourced to some of the external agencies.

FUTURE ACTION

1. More training programmes are needed for rest of the organizations and library staff left out from the two courses suggested by the NIC. These training programmes can be conducted in the Police Training Institute also wherever facilities are available;

2. After six months, feedback from the organizations will be sought to see how many records have been entered in the database;
3. The infrastructure available/required can be reviewed by the BPR&D for further strengthening the project; and
4. Guidelines to the organizations can be circulated by the BPR&D for minimum hardware/library staff/data entry jobs/transfer, etc so that the top management can provide due attention to the project.

The aforesaid observations and recommendations are being sent to all the states/UTs for doing the needful with a view to preparing the ground for the implementation of this project to introduce e-governance in all police/prison libraries.

CONCLUSION

Using library application software developed by the NIC, an integrated and common library network will be developed in India for Police Organizations where a union catalogue of all the libraries will be available over internet along with the digital documents. This complete plan will be executed within two years i.e. December, 2008 with the active co-operation and in collaboration with the State Police/ Prison deptts.

LIST OF AWARDEES OF POLICE MEDAL FOR MERITORIOUS SERVICE ON THE OCCASION OF REPUBLIC DAY-2007

Andhra Pradesh

Shri Govind Singh,
DIGP, Visakhapatnam Range,
Andhra Pradesh.

Shri Anjani Kumar,
DIGP, Nizamabad Range,
Andhra Pradesh.

Shri Ravi Gupta,
DIG, Warangal, Andhra Pradesh.

Shri K. Raja Sikhamani,
Comdt, Home Guards, Hyderabad,
Andhra Pradesh.

Shri Suhas Chaturvedi,
Dy. S.P., V&E, Hyderabad Rural Unit,
Andhra Pradesh.

Shri U. Rama Mohan,
Dy. S.P., APFSL Hyderabad,
Andhra Pradesh.

Shri G. Mallaiah,
Inspector, SIB. Int., Andhra Pradesh.

Shri S. Jawaharbasha,
Inspector, V&E Kurnool,
Andhra Pradesh.

Shri Ch. Rajasekhara Reddy,
Inspector, Kurnool Town Circle,
Andhra Pradesh.

Shri R. Bhima Rao,
ARSI, 3rd Bn APSP, Andhra Pradesh.

Shri N. Kota Reddy,
ARSI, 2nd Bn, APSP, Kurnool,
Andhra Pradesh.

Shri K. A. Bari,
ARSI, SAR/CPL,
Andhra Pradesh.

Shri Shaik Mahaboob Basha,
ARSI, PTC, Anantapur, Andhra Pradesh.

Shri J. Malgonda,
Head Const, SBHC Banswada,
Andhra Pradesh.

Shri J. R. Babu,
SB RPHC, Guntakal, Andhra Pradesh.

Shri Md. Qutbuddin,
Head Const., Police Transport Organ. Hyderabad,
Andhra Pradesh.

Shri B. R. D. Rao,
Const., Range Office, Andhra Pradesh.

Arunachal Pradesh

Shri Manoj Kumar Lall,
DIGP, PHQ-Itanagar, Arunachal Pradesh.

Assam

Shri K. V. Singh Deo, DIGP (Security),
SB Assam, Guwahati., Assam.

Shri A. J. Baruah,
S.P., Sonitpur, Assam.

Shri B. B. Chetri,
S.P., N.C. Hills Halflong, Assam.

Shri Moneswar Borah,
ASI, V&AC Guwahati, Assam.

Shri Premo Dihingia,
Havildar, 4th Bn, APBN.
Kahilipara Guwahati, Assam.

Shri T. S. Talukdar,Head Const,
CID Orgn. Guwahati, Assam.

Shri Durlav Deka, Const,
CID Org. Ulubari, Guwahati Assam.

Bihar

Shri K. M. Sinha,
Addl.S.P., Bihar Police Radio, HQ, Bihar.

Shri Anjani Kumar Sinha,
Sergeant of Police, PHQ, Bihar,
Patna, Bihar.

Shri Arvind Kumar,
S.I., SB DGP Office, Bihar.

Md. Wasi Ahmad Khan,
Havildar, BMP-14, Bihar.

Md. Zafrullah Khan,
Const, Patna, Bihar.

Shri Hardeo Pandit,
Sepoy, BMP-2 Dehri, Bihar.

Chhattisgarh

Shri Narendra Kumar Khare,
Comdt, 8th Bn, Chhattisgarh Armed Force,
Chhattisgarh.

Shri Dhirendra Singh,
APC,11th Bn, CAF, Chhattisgarh.

Shri Anand Singh Rawat,
Section Commander,10 Bn, CAF Surguja,
Chhattisgarh.

Shri Bhagwat Singh Tomar,
Head Const, 4th Bn, CAF Mana Raipur C.G,
Chhattisgarh.

Shri Shashi Bhushan Singh,
Head Const, 4 Bn, CAF Mana Raipur, Chhattisgarh.

Shri P. Danteshwar Rao,
Sr. Const, SIB, Chhattisgarh.

Shri Ram Naresh Singh Sengar,
S.I., Gidam P.S., Dantewada, Chhattisgarh.

NCT of Delhi

Shri Ahmad Saeed Khan,
CVO, DTC, Delhi Administration,
N.C.T. of Delhi.

Shri Tajender Singh Luthra,
Addl CP, C.W.C. Nanakpura, New Delhi,
N.C.T. of Delhi.

Dr. N. Dilip Kumar,
Addl CP , Prov. & Logistics Delhi ,
N.C.T. of Delhi.

Shri Prabhakar,
DCP, EOW, N. Delhi,
N.C.T. of Delhi

Shri Siri Ram Meena,
ACP, R P Bhawan, New Delhi,
N.C.T. of Delhi.

Shri Yashwant Singh Yadav,
ACP, PTC,New Delhi,
N.C.T. of Delhi.

Shri Chandra Has,
Inspector, Anti Corruption Branch,
N.C.T. of Delhi.

Ms. Achala Rani,
Women Inspector, South West Distt., New Delhi,
N.C.T. of Delhi.

Shri Ramesh Kumar,
Inspector, SHO/Subzi Mandi,
North Distt. New Delhi,
N.C.T. of Delhi.

Shri Rajinder Singh,
S.I., Security New Delhi,
N.C.T. of Delhi.

Shri Girdhari Singh,
ASI, Security, New Delhi,
N.C.T. of Delhi.

Shri Chura Mani,
Head Const, 2nd Bn, DAP, Delhi,
N.C.T. of Delhi.

Shri Keshar Chand,
Head Const, South West, New Delhi,
N.C.T. of Delhi.

Gujarat

Shri S. R. Varmora,
Dy. SP., SRPF Gr-13 Ghanteshwar, Rajkot, Gujarat.

Shri I. N. Desai,
Inspector, State Traffic Branch Gandhinagar, Gujarat.

Shri D. H. Goswami,
Inspector, ATS Ahmedabad, Gujarat.

Shri Siraj A. Zabha,
S.I., R.R. Cell Surat Range Surat, Gujarat.

Shri N. L. Vyas,
S.I., Sector-1 Ahmedabad, Gujarat.

Shri Abdulkarim A. Shaikh,
S.I., SPL. Branch, Vadodara City, Gujarat.

Shri Meghrajbhai N. Harsh,
S.I., Reader Branch S.P. Office, Palanpur, Gujarat.

Shri Moghajibhai R. Gameti,
Head Const, ECO Cell Mehsana, Gujarat.

Shri Vithalbhai L. Vaghasiya,
Const, SRPF Gr.13 Ghanteshwar Rajkot,
Gujarat.

Goa

Mrs. T.T. D'Souza,
Inspector, CID Immigration Dabolim Airport, Goa.

Haryana

Shri Ramesh Chandra Mishra,
Dig, M&W, PHQ Panchkula, Haryana.

Shri Mohinder Singh Malik,
SP, Jind, Haryana.

Shri Jagdish Chand,
Inspector, IT Cell, PHQ Panchkula, Haryana.

Shri Raj Pal,
S.I., SVB Panchkula, Haryana.

Shri Tarkeshwar,
S.I., Hissar, Haryana.

Shri Vasdev,
ASI, 2nd Bn, HAP Madhuban, Haryana.

Shri Inderjeet Singh,
ASI, O/o IGP/RLYS & Ts. Panchkula, Haryana.

Shri Kundan Singh,
ASI, CID, Haryana.

Shri Madan Lal,
Head Const, 2nd Bn, HAP, Haryana.

Himachal Pradesh

Shri Sansar Chand,
Inspector, VIG. ACZ UNA,
Himachal Pradesh.

Shri Gurdial Singh Chaudhary,
Inspector, Barotiwala,
Himachal Pradesh.

Ms. Shakuntla Devi Sharma,
S.I., Shimla, Himachal Pradesh.

Jharkhand

Shri Om Prakash Khare,
DIGp, SB Jharkhand,
Ranchi, Jharkhand.

Shri Sagar Gurung,
Havildar, JAP Doranda, Ranchi, Jharkhand.

Jammu & Kashmir

Shri Gh. Ahmad Dar,
SSP, Security Kashmir, Jammu & Kashmir.

Shri Mansoor Ahmad Untoo,
S.P., CID HQ, Jammu & Kashmir.

Shri Puran Singh Katoch,
Dy. SP., SSG HQ, Jammu & Kashmir.

Shri Rafiq Ahmad Sheikh,
Inspector,Vigilance, Jammu & Kashmir

Shri Mohd. Shaban,
Inspector, SKPA Udhampur,
Jammu & Kashmir.

Shri Moti Lal Bhat,
Head Const, NGO Sec. CID HQ,
Jammu & Kashmir.

Shri Sajjad Hussain Ganai,
Asst. Dir. (Dy. SP.), SSG, Jammu & Kashmir.

Karnataka

Shri M V Murthy,
IGP (Vigilance), KPTCL Bangalore, Karnataka.

Shri Kamal Pant,
DIGP, Intelligence Bangalore, Karnataka.

Shri K. S. Karning,
S.P., Dy. Comdt. RB, Karnataka.

Shri R.Nagaraj Urs,
S.P., O/o DG & IGP Bangalore, Karnataka.

Shri K. Eshwar Prasad,
ACP, Central Traffic, S.D. Bangalore City, Karnataka.

Shri M. Pradeep Kumar,
Dy. SP., KPTCL Bangalore, Karnataka.

Shri H. K. Srinivas Prasad,
Dy. S.P., Wireless Bangalore, Karnataka.

Shri N. Shivakumar,
Astt. Comdt, Xth Bn, KSRP, Shiggaon, Karnataka.

Shri Shankaregowda,
Inspector, Devaraja Traffic Police Station, Mysore,
Karnataka.

Shri N. Chalapathy,
Inspector, BDA Bangalore, Karnataka.

Shri A. Yalagaiah,
S.I., Bidadi PS Bangalore, Karnataka.

Shri Manjunatha Prakash,
S.I., Ulsoor TR. PS. Bangalore, Karnataka.

Shri M. B. Sayyed,
ASI, DCRB Belgaum, Karnataka.

Shri K. Nagaraja,
Head Const, CSB Bangalore, Karnataka.

Kerala

Shri Y. Anil Kumar,
IGP (Administration), PHQ Trivandrum, Kerala.

Shri K. Nadarajan,
SP, Kasaragod, Kerala.

Shri Abraham Mathew,
SP, SBCID Ernakulam Range, Kerala.

Shri K. P. Lilaram,
Asst. Commissioner of Police, Kochi City, Kerala.

Shri A. Jayarajan,
Asst Comdt, Mangattuparamba,Kerala.

Shri T. J. Joshy Joseph,
Dy. S.P., VACB Special Cell Kozhikode, Kerala.

Shri Methew Joseph,
Dy. S.P.,VACB Alappuzha, Kerala.

Shri K.V.Thomas Mathew,
Inspector, Kottayam, Kerala.

Shri K.V. Raghavan Nair,
Head Const, CB CID, Kasaragod, Kerala.

Shri I. Nazimudeen,
Head Const, SB CID , Kollam, Kerala.

Madhya Pradesh

Shri Arvind Kumar,
IGP (PSO to DG), Bhopal, Madhya Pradesh.

Shri Anvesh Manglam,
IGP Range,Balaghat, Madhya Pradesh.

Shri Sanjay Vasantrao Mane,
DIG, Intelligence, PHQ,MP, Bhopal, Madhya Pradesh.

Shri Mohammad Sharif Khan,
Dy. S.P. (Radio), Bhopal, Madhya Pradesh.

Shri Mahendra Singh Thakur,
Dy. S.P. (CID) PHQ, Bhopal, Madhya Pradesh.

Shri Rajendra Singh Bhadouriya,
Coy Commdr, Indore, Madhya Pradesh.

Dr. Satyanarayan Soni,
Inspector (M), IGP Ujjain Range,
Madhya Pradesh.

Shri Surendra Singh Chauhan,
Head Const,13th Bn, SAF Gwalior, Madhya Pradesh.

Shri Jainarayan Soni,
Head Const, GRP Bhopal,
Madhya Pradesh.

Shri Niranjan Singh Rajput,
Head Const, S.P.E., Lokayutka Sagar,
Madhya Pradesh.

Shri Ramveer Singh Raghuvanshi,
Const, 26th Bn, SAF Guna,
Madhya Pradesh.

Shri Jagdish Prasad Gour,
Const, Bhopal, Madhya Pradesh.

Shri Prem Lal Jaat,
Const, SPE, Lokayukta Sagar,
Madhya Pradesh.

Shri Chander Singh Parmar,
Const, Special Police Establishment,
Ujjain, Madhya Pradesh.

Shri Deen Dayal Tiwari,
Const, Bhopal, Madhya Pradesh.

Shri Chandrasen Pande,
Senior Const, S.B.I.E.O.,Bhopal,
Madhya Pradesh.

Maharashtra

Shri Sadanand Vasant Date,
Addl C.P, E.O.W., C.B. Mumbai, Maharashtra.

Shri Dinkar Govind Hiremani,
Asst Comdt., S.R.P.F.GR.X Solapur,
Maharashtra.

Shri Anilkumar Lakduji Jagtap,
Police Inspector, Nashik City, Bhadrakali P.St,
Maharashtra.

Shri Pandurang Uddhavrao Kohinkar,
Inspector, Pune City,
Maharashtra.

Shri Maroti Shankarrao Dafale,
PI (One Step Dy. SP), CID, M.S. Pune, Maharashtra.

Shri Ramesh Nimbaji Patil,
Police Inspector, Nashik City,
Ambad P. St., Maharashtra.

Shri Shamrao Yadu Mohite,
PI (One Step Dy. SP), ACB, Pune, Maharashtra.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

Shri Dinesh Mohan Ahir,
Police Inspector, ATS, Mumbai City, Maharashtra.

Shri Milind Bhikaji Khetle,
Inspector, Dy. Comdt.B, CID, Mumbai, Maharashtra.

Shri Narsing Bhimsing Thakur,
Asstt. Police Inspector, GRP, Jalna,
Maharashtra.

Shri Balasaheb Bhau Gadekar,
Police Sub Inspector, L.T.Marg,P.St. Mumbai,
Maharashtra.

Shri Motiram Mahadeo Pakhare,
Police Sub Inspector, Nagpur Rural,
Maharashtra.

Shri Rajan Govind Chavan,
Police Sub Inspector, Nagpada P.St, Mumbai,
Maharashtra.

Shri Bapu Dnyandeo Girame,
Police Sub Inspector, S.R.P.F. GR.V, Daund,
Maharashtra.

Shri Nagnath Sandipan Gore,
ASI, ACB, Pune, Maharashtra.

Shri Shripati Vithu Bhalekar,
Asi, S.R.P.F. GR.II, Pune, Maharashtra.

Shri Govind Vitthalrao Gadhe,
ASI, Police HQ Nanded, Maharashtra.

Shri Rajendra Nagorao Kolhe,
ASI, SPl.Branch, Nagpur City, Maharashtra.

Shri Tukaram Sheshrao Anchule,
ASI, MT, PHQ Nanded, Maharashtra.

Shri Bajirao Ramchandra Kumbhar,
Head Const, Kolhapur Range,
Maharashtra.

Shri Limbaji Pandurang Shrimangal,
Head Const, SB, Solapur City,
Maharashtra.

Shri Shivaji Yashwant Pawar,
Head Const, LCB, Kolhapur, Maharashtra.

Shri Atmaram Dhondu Kasar,
Head Const, Spl.Branch. Pune City,
Maharashtra.

Shri Dilip Rajaram Deore,
Head Const, MT, Nashik Rural, Maharashtra.

Shri Ashok Anna Kore,
Head Const, PHQ, Sangli,
Maharashtra.

Shri Rajendra Baliram Kshatriya,
Head Const, Traffic BR, Nashik City,
Maharashtra.

Shri Dnyaneshwar Baburao Thorat,
Head Const, RCP, Mumbai City,
Maharashtra.

Shri Chandrakant Khanderao Patil, Head Const,
Bhadrakali P.St. Nashik City,
Maharashtra.

Shri Nandkumar Shankarrao Jadhav,
Head Const, LCB, Kolhapur,
Maharashtra.

Shri Balu Raghunath Gaikawad,
Head Const, Vadgaon P.St. Kolhapur,
Maharashtra.

Shri Rajendra Sudam Toraskar,
Police Naik, Kudal P.St. Sindhudurg,
Maharashtra.

Shri Appasaheb Dashrath Patil,
Naik, Gandhinagar, P.St., Maharashtra.

Shri S. B. Devane,
Police Naik, Juna Rajwada PS Kolhapur,
Maharashtra.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

Manipur

Shri N. Apabi Singh,
Jemadar Adjutant, PTS, Pangei, Imphal,Manipur.

Shri Bhishamdev Thakur,
Bn. Havildar Major, PTS, Pangei, Imphal, Manipur.

Mizoram

Shri Lalthlamuana,
Inspector, District Magistrate Court Lunglei, Mizoram.

Shri N. Gurnghinga,
Head Const, or Branch, SP Office Lunglei, Mizoram.

Orissa

Shri Santhosh Kumar Upadhyay,
DIGP, Southern Range Berhampur, Orissa.

Shri Sudhanshu Sarangi,
DIGP, SWR Sunabeda, Orissa.

Shri Arun Kumar Sarangi,
DIGP, Talcher Angul, Orissa.

Shri Surendra Nath Parida,
Inspector, Sb Cuttack, Orissa.

Shri Swarup Kumar Parida,
Inspector, Vig. Unit Office, Rourkela, Distt., Orissa.

Shri Budhi Bahadur Thapa,
Havildar, Osap 2nd Bn Jharsuguda, Orissa.

Shri Manoranjan Samal,
Const, Vigilance Dte. Buxi Bazar, Cuttack, Orissa.

Punjab

Shri S M Sharma,
Adgp/C&T, Chandigarh, Punjab.

Shri Gopal Dass,
SI/Reader ADGP, Chandigarh, Punjab.

Shri Som Nath,
ASI/Reader SDAG-cum OSD to DGP, Chandigarh, Punjab.

Shri Kuldeep Singh,
ASI, CID HQ, Chandigarh, Punjab.

Shri Bikkar Singh,
ASI/PSO to ADGP, Int, Chandigarh, Punjab.

Shri Surjit Singh,
ASI I/C Kot, 7 Bn Pap Jalandhar, Punjab.

Shri Surinder Kumar,
ASI(orp), Reader to SSP Ludhiana, Punjab.

Shri Jagtar Singh,
Head Const, Jalandhar, Punjab.

Rajasthan

Shri Prabhati Lal Jat,
Coy. Commander, SO to ADGP, Jaipur, Rajasthan.

Shri Lalu Ram,
Platoon Commander,11th Bn RAC Delhi, Rajasthan.

Shri Hridya Nand Pandey,
SI, CID (Sb) Zone, Jaipur,
Rajasthan.

Shri Ramdev Prajapat,
ASI, PS Sursagar, Jodhpur City, Rajasthan.

Shri Mali Ram Saini,
ASI, CID CB Jaipur, Rajasthan.

Shri Budhi Prakash,
ASI, Kota City, Rajasthan.

Shri Astali Khan,
Head Const, 3 Bn RAC Bikaner, Rajasthan.

Shri Jai Kumar Sharma,
Head Const.,CID CB Rajasthan, Rajasthan.

Shri Sanjeev Babu,
Head Const., Police Tele Communication Rajathan.

Shri Sohan Lal Vishnoi,
Head Const., PS Sadar Kotwali, Rajasthan.

Shri Rameng Patidar,
Head Const., PS Sadar Banswara, Rajasthan.

Shri Dhulji Bheel,
Head Const., PS Sallopat, Distt. Banswara, Rajasthan.

Shri Hari Ram Yadav,
Const., PS Rajaldesar, Rajasthan.

Shri Ram Gopal Nai,
Const., ACB Jaipur, Rajasthan.

Sikkim

Shri Tenzing Mapen Bhutia,
Dy. SP, Gangtok, Sikkim.

Tamil Nadu

Shri A. K. Viswanathan,
DIG CID Intelligence, Chennai,
Tamil Nadu.

Shri P. Kannappan,
Dy Cop, Madhavaram, Chennai City, Tamil Nadu.

Shri P. Sakthivelu,
Dy Cop, Salem City, Tamil Nadu.

Shri J. Gunasekaran,
Comdt, TSP X Bn, Ulundurpet,
Tamil Nadu.

Shri Johnson Arthur,
Adl.Dy. SP, Q Branch CID, Chennai,
Tamil Nadu.

Shri M. Chandrapaul,
Dy. SP, Kanayakumari District,
Tamil Nadu.

Shri T. Krishna Rao,
Dy. SP, V & AC Chennai, Tamil Nadu.

Shri P.V.Thomas,
Dy. SP, Chennai,Tamil Nadu.

Shri R. A. Ambigapathy,
Dy. SP,Tiruchy, Tamil Nadu.

Shri K. Ponnuchamy,
Dy. SP, SIC, V & AC, Chennai, Tamil Nadu.

Shri R. Devadoss,
S.I., V. & AC Kanyakumari, Tamil Nadu.

Tripura

Shri Rakesh Ranjan,
Digp, Range, Tripura.

Uttar Pradesh

Smt. Anju Gupta,
Dig, Uno DC, India, New Delhi,
Uttar Pradesh.

Shri Virendra Kumar,
Cvo, Tehri Hydro Electric Development, Corpn,
Uttar Pradesh.

Shri Rakesh Pradhan,
Addl.SP., Int. Hqrs Lucknow,
Uttar Pradesh.

Shri Raj Narayan Shukla,
Asstt. Comdt, 45 Bn PAC Aligarh,
Uttar Pradesh.

Shri Vinod Kumar Yadav,
Dy. SP., Saharanpur, Uttar Pradesh.

Shri Ram Chandra Yadav,
Dy. SP., Deoria, Uttar Pradesh.

Shri Raj Narayan Shukla,
Dy. SP., CB Cid HQ Lucknow,
Uttar Pradesh.

Shri Hari Shanker Shukla,
Dy. SP, Agra, Uttar Pradesh.

Shri Om Prakash Mishra,
Dy. SP., Int. HQ Lucknow,
Uttar Pradesh.

Shri Sanjay Choudhry,
Dy. SP., ISBF Range Mirzapur,
Uttar Pradesh.

Shri Sarju Prasad Choudhry,
Dy. SP., Allahabad, Uttar Pradesh.

Shri Indrapal Singh Fobia,
Dy. SP.,Liu Saharanpur,
Uttar Pradesh.

Shri Charan Singh,
Dy. SP.,Rae-Bareli, Uttar Pradesh.

Shri Om Prakash Rai,
Dy. SP.,Mirzapur, Uttar Pradesh.

Shri Sohanpal Singh Tomar,
Dy. SP., Faizabad, Uttar Pradesh.

Shri Jai Narayan Singh,
Asst. Comdt, 42 Bn PAC Allahabad,
Uttar Pradesh.

Shri Dharmendra Kumar Yadav, Inspector,
Jyotibaphule Nagar,
Uttar Pradesh.

Shri Prakash Chandra Sachan,
SI, Training and Security, Lucknow, Uttar Pradesh.

Shri Lal Chand Singh,
SI/ Steno,Varanasi, Uttar Pradesh.

Shri Brij Nandan Sharma,
SIO, Muzzafarnagar/SB, Uttar Pradesh.

Shri Subhash Chandra Srivastav,
SI(m), PAC HQ Lucknow, Uttar Pradesh.

Shri Dinesh Kumar Saxena,
Dy. Inspr(M)/Steno,
Training and Security Hqrs,
Lucknow, Uttar Pradesh.

Shri Shri Ram,
Radio Station Officer, Radio Hqrs Lucknow,
Uttar Pradesh.

Shri Ram Vishal Sharma,
Head Operator., Radio Hqrs. Lucknow, Uttar Pradesh.

Shri Dhirendra Kumar Dhawan, Quarter Master,
35 Bn PAC Lucknow, Uttar Pradesh.

Shri Pradeep Singh,
Head Const, Saharanpur,
Uttar Pradesh.

Shri Dashrath Maurya,
Head Const, Barabanki, Uttar Pradesh.

Shri Bhola Singh,
Head Const, Hardoi, Uttar Pradesh.

Shri Beerbal Prasad,
Head Const, 42 Bn PAC Allahabad,
Uttar Pradesh.

Shri Amjad Ali,
Head Const, Badaun, Uttar Pradesh.

Shri Rajendra Kumar Sharma,
Head Const, Shahjahanpur,
Uttar Pradesh.

Shri Raj Narain,
Const, Anpur Nagar, Uttar Pradesh.

Shri Pradeep Kumar Tripathi,
Const, Training and Security, Lucknow,
Uttar Pradesh.

Shri Vinod Kumar,
Const, Bulandsahar, Uttar Pradesh.

Uttranchal

Shri Mahesh Chandra Tamta,
Addl SP , PHQ, Dehradun, Uttaranchal.

Shri Devendra Singh Negi,
Dy SP, District-Pithoragarh, Uttaranchal.

Shri Hira Singh Rauthan,
Reserve Inspector, Nainital, Uttaranchal.

Shri Khyali Dutt Pathak,
Rso, Police Headquarters, Dehradun, Uttaranchal.

West Bengal

Shri Ranvir Kumar,
Jt. Commissioner of Police, Kolkata, West Bengal.

Shri S. Chatterjee,
Inspector, IR Bn. DGP, West Bengal.

Shri R. K. Sarkar,
SI, North 24 Pgs, West Bengal.

Shri Pinaki Khanra,
SI, Int. Branch West Bengal,
West Bengal.

Shri Arabinda Barik,
SI, Reserve Force, West Bengal.

Shri Sudhir Misra,
Jt. C.P., Lal Bazar, Kolkata,West Bengal.

Ms. Subhra Sil,
Asst. C. P., Hq, Lalbazar,West Bengal.

Shri Anil Kumar,
IGP Training, Kolkata, West Bengal.

Shri S.C. Mondal,
IGP, IB. West Bengal, West Bengal.

Shri C. R. Roy,
SI, VC WB Bikash Bhavan, Salt Lake, Kolkata,
West Bengal.

Shri B. K. Goswami,
RO(I), Birbhum Police Line, West Bengal.

Shri Ashim Chanda,
ASI, DIG (AP) Cell Bkpore, North 24 Pgns,
West Bengal.

Shri B. K. Das,
Const, SB 14 Lord Sinha Road,
West Bengal.

Shri B. D. Goswami,
ASI, SAP 8th Bn Lalbagan Barrackpore,
West Bengal.

Shri D. P. Chhettri,
SI(AB), SAP 12 Bn Jalpaiguri,
West Bengal.

Shri N. C. Dey,
ASI, Int. Branch West Bengal,
West Bengal.

Shri Rafiuddin Ahamed,
Const, DD. Lalbazar, West Bengal.

Shri Bhanu Pariyar,
Const, DAP Balurghat,
West Bengal.

A & N ISLANDs

Shri K. Ramakrishna Pillai,
S.I., Home Guard Office, A & N Islands.

Shri N. Arumugam, Head Const,
Car Nicobar, A & N Islands.

Chandigarh

Shri Tulsi Ram,
Head Const, CID (FRO), Chandigarh, Chandigarh.

Lakshadweep

Shri C. Syed Ismail,
Assistant S.I., Amini Police Station,
Lakshadweep.

Pondicherry

Shri Vannan Kandy Achuthan, Inspector,
Welfare Section, Pondicherry.

Shri S.P. Sundramoorthy,
S.I., Katterikuppam Ps, Pondicherry.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

CPOS

Assam Rifles

Shri Attar Chand,
Subedar Major, Shillong, Assam Rifles.

Shri Shiv Kumar Singh Tyagi,
Comdt, Hq 23 Sector (Ar) Aizawl,
Assam Rifles.

Shri Kharka Bahadur Aley,
Subedar Major, Churachandpur,
Assam Rifles.

Shri Kharka Bahadur Sunwar,
Coy 2/Ic, Churachandpur, Assam Rifles.

Shri Khimanand Joshi,
Sub/Gd, Kadamtala, Distt-Imphal, East Manipur,
Assam Rifles.

Shri Umesh Kumar Thapa,
Naib Subedar, Kadamtala, Distt-Imphal East Manipur,
Assam Rifles.

Shri Ram Prasad Newar,
Naib Subedar/Gd, Kadamtala,
Distt-Imphal, East Manipur,
Assam Rifles.

Shri Kunwar Singh,
Naib Subedar, Aizawl, Assam Rifles.

Shri Paras Nath,
Subedar Major, 41 Assam Rifles, Lunglei, Mizoram,
Assam Rifles.

Shri Vidya Prasad Singh,
Subedar Clerk, Silchar, Assam Rifles.

Shri Bhumidhar Haloi,
Subedar/Cipher, 25 Assam Rifles,
C/O 99 APO, Assam Rifles.

B.S.F.

Shri Sanjay Kundu, DIG, SHQ BSF Teliamura,
Distt-Tripura,
Border Security Force.

Shri Sushil Kumar Singh,
Comdt, 53 Bn BSF Gogaland, C/O 56 APO,
Border Security Force.

Shri Sunil Kumar Tyagi,
Comdt, Cenwosto BSF, Tekanpur,
Border Security Force.

Shri Rajesh Gupta,
Comdt (Proc), Hq DG BSG 10 Cgo Complex,
Lodhi Road, Border Security Force.

Shri Keshawa Nand Suyal,
Comdt, 129 Bn BSF Indreshwar Nagar,
C/O 56 APO, Border Security Force.

Shri Jatinder Singh Oberoi,
Comdt, BSF Academy, Tekanpur,
Border Security Force.

Shri Hardeep Singh,
Comdt, BSF Academy, Tekanpur,
Border Security Force.

Shri Kuldeep Saini,
Law Officer-GR.I, Hq DG BSF,
CGO Complex, New Delhi,
Border Security Force.

Shri Ravi Kiran Thapa,
Comdt, 55 BN BSF PO. & Distt-Kikaner, Rajasthan,
Border Security Force.

Dr Mukesh Saxena,
CMO (Sg), SHQ BSF Chholi, Udyog Vihar,
Sriganganagar, Border Security Force.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

Shri Om Prakash,
2-IC, 25 Bn BSF Chhawla Camp, New Delhi,
Border Security Force.

Shri Sikander Singh Dhillon,
2-IC,12 Bn BSF, Khasa, Chhehrata, Amritsar(pb),
Border Security Force.

Shri Suresh Kumar Sharma,
2-IC, 143 Bn BSF, Panthachowk, Srinagar (J&K),
Border Security Force.

Shri Laxman Singh,
2-IC, 88 Bn BSF, Alamganj, Dubri, Assam,
Border Security Force.

Shri Lal Bahadur Thapa,
Dy. Comdt., 50 Bn BSF Raninagar,
PO. & Distt - Jalpaiguri, W.B.
Border Security Force.

Shri Chandan Kumar Mandal,
Dy. Comdt., 121 Bn BSF, Umbling,
East Kasi Hills, Shillong,
Border Security Force.

Shri Rabindra Chandra Das,
Dy. Comdt., 34 Bn BSF, PO.-Harish Nagar,
Distt-tripura, Border Security Force.

Shri Rafique Ahmed Khan,
Dy. Comdt., BSF Academy, Tekanpur,
Border Security Force.

Shri Rajesh Kumar Sahay,
Dy. Comdt., 38 Bn BSF, Dobasipara,
West Garo Hills, Meghalaya,
Border Security Force.

Shri Poonam Chand Barupal,
AC,1033 BSF Arty, Sagar Road,
Bikaner, Rajasthan,
Border Security Force.

Shri Jabar Singh,
Inspector, 71 Bn BSF , Anupgarh, Sriganganagar,
Border Security Force.

Shri Om Chand,
Inspector, 96 Bn BSF, Arunachal, Cachar, Assam,
Border Security Force.

Shri G. Gopinathan Nair,
Inspector/PA, Hq DG BSF, CGO Complex,
New Delhi, Border Security Force.

Shri Vijay Singh Mann,
Inspector (Min), FTR HQ BSF, Po.- CRPF
Group Centre, Gandhinagar,
Border Security Force.

Shri Sunder Lal,
Sub Inspector, 28 Bn BSF, Barmer, Rajathan,
Border Security Force.

Shri Sri Niwas Thakur,
SI,137 Bn BSF, Raisingnagar, Ganganagar,
Border Security Force.

Shri N. Moses,
ASI/RM, SIW, Tigri Camp, Madangir,
New Delhi, Border Security Force.

Shri C. Chandran,
Head Const.,102 Bn BSF, Distt-Barmer, Rajasthan,
Border Security Force.

Shri Jagmohan Singh,
Head Const.,124 Bn. BSF, Gandhidham,
Kutch Gujarat, Border Security Force.

Shri Abdul Razak,
Head Const., 64 Bn BSF,Jaraitala Bazar Cachar,
Assam, Border Security Force.

Shri Ganga Singh,
Head Const., Cenwosto, BSF, Tekanpur,
Border Security Force.

Shri S. Nesayan,
Head Const, 1st Bn, Praharinagar, Arimile, Garo Hills,
Meghalaya,
Border Security Force.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

Shri Dilbag Singh Rajput,
Head Const., 120 Bn BSF, Jalipa, Barmer, Rajasthan,
Border Security Force.

Shri Rajender Singh,
Head Const., 137 Bn BSF, Raisinghnagar,
Sriganganagar, Border Security Force.

Shri B. N. Kalita,
Head Const., 108 Bn BSF, Baishnab Nagar, Malda
W.B., Border Security Force.

Shri Paramjeet Singh,
Head Const., 75 Bn BSF, Srikaranpur, Karanpur,
Sriganganagar,
Border Security Force.

Shri Sugan Lal,
Head Const., 24 Bn BSF, Jhajuwala, Bikaner,
Rajasthan,
Border Security Force.

Shri Basti Ram Nehra,
Head Const,128 Bn BSF, Patgaon,
PO.-Azara, Guwahati,
Border Security Force.

Shri Santu Lal Balmiki,
Lance Naik, 02 Bn BSF, Tagorevilla, Kolkata,
Border Security Force.

Shri Hem Bahadur Chhetry,
LNK, 96 Bn BSF, Po-Arunachal, Cachar, Assam,
Border Security Force.

Shri Sultan Singh,
Gardner, TSU BSF,Tekenpur,
Border Security Force.

Shri Amarjit Singh,
EF (Sweeper), 108 Bn BSF, Baishnab Nagar,
Chamagram, Malda,
Border Security Force.

C.R.P.F.

Dr. Bhanwar Lal Meena,
CMO, SG /DIG (Med), CH, CRPF, Neemuch,
M.P., C.R.P.F.

Dr. Ramesh Chandra Mohanty,
DIG (MED), C.H. Imphal, C.R.P.F.

Shri Savyasachi Mukherjee,
ADIG, Lucknow, C.R.P.F.

Shri Ranjit Singh,
ADIG (PERS-I), DTE. GENL, CRPF, CGO Complex,
New Delhi, C.R.P.F.

Shri Madan Singh Raghava,
ADIGP, GC, CRPF, Ajmer, C.R.P.F.

Shri S.A.M. Kazmi,
ADIG, GC, Srinagar, C.R.P.F.

Shri Amar Singh,
ADIG, NWS Hqrs, Chandigarh, C.R.P.F.

Shri Kulbir Singh,
ADIG, R. K. Puram, New Delhi, C.R.P.F.

Shri K. Arkesh,
ADIG, S/.S Hqr, Hyderabad, C.R.P.F.

Shri Mukesh Kumar Sinha,
ADIG, Navi Mumbai, C.R.P.F.

Shri S. N. Rudrappa,
ADIG, DTE Genl, CRPF, New Delhi,
C.R.P.F.

Shri Deep Kumar Sirohi,
ADIG, GC, CRPF, Pinjore, C.R.P.F.

Shri Suraj Bhan Kajal,
Comdt., 98 Bn, Bawana, New Delhi,
C.R.P.F.

Shri Prakash Janardhan Rao Mohane,
Comdt., 184 Bn, Rangareddy (AP), C.R.P.F.

Shri Praveen Kumar Sharma,
Comdt., RTC-1, CRPF Neemuch, C.R.P.F.

Shri Vijay Kumar,
Comdt., 188 Bn, CRPF, Allahabad, C.R.P.F.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

Shri Rameshwar Lal,
Comdt., 180 Bn, Bhopal, C.R.P.F.

Shri Sharad Kumar Sharma,
Comdt., 181 Bn, CRPF, Shivpuri, (MP), C.R.P.F.

Shri Ram Kishan Sharma,
Comdt, M.A. Road, Srinagar, J&K, C.R.P.F.

Shri A. Vivekananth,
Comdt, Crpf, Campus, Avadi, C.R.P.F.

Shri Om Kar Koslia,
Comdt., 1st Bn, Inder Nagar, Srinagar, J&K, C.R.P.F.

Shri P.M. Damodaran,
Comdt., 182 Bn, Banglore, C.R.P.F.

Shri Indra Deo Singh,
Comdt., 84 Bn, CRPF, Jaipur,
Rajasthan, C.R.P.F.

Shri Narendra Singh,
Comdt., O/O Dig Nagpur, C.R.P.F.

Shri N. K. Nath,
Comdt., 144 Bn, CRPF, Nagaon (Assam), C.R.P.F.

Shri Hari Singh,
2 I/C,GC, CRPF, Gandhinagar, C.R.P.F.

Shri H. S. Mall,
2 I/C, GC, CRPF, Pune, C.R.P.F.

Shri A. K. Bajpai,
2 I/C, 77 Bn, Srinagar, J&K, C.R.P.F.

Shri V K Mishra,
Dy. Comdt., Aizawal, Mizoram,
C.R.P.F.

Shri Gurcharan Singh,
Dy. Comdt., GC, Jalandhar, C.R.P.F.

Shri Ram Naresh Prasad,
Astt. Comdt, GC, CRPF, Sindri, C.R.P.F.

Shri Debasis Poddar,
Astt. Comdt,177 Bn, Durgapur, C.R.P.F.

Shri Mota Ram Choudhary,
Astt. Comdt, RTC-1, Neemuch, C.R.P.F.

Shri Babu K.,
Inspector, 33 Bn, CRPF, North, Tripura, C.R.P.F.

Shri J. P. Sharma,
Inspector/ Tech.,1st SIG Bn CRPF
New Delhi, C.R.P.F.

Shri B. S. Negi,
Inspector/Crypto, 5th Signal Bn Mohali, Punjab,
C.R.P.F.

Shri Sreedharan M.,
SI, 42 Bn, Srinagar, C.R.P.F.

Shri Ram Chand,
SI,GC, CRPF, BTB, C.R.P.F.

Shri M.C. Dogra,
SI, 94 Bn, Dimapur, C.R.P.F.

Shri Madan Singh,
SI, 19 Bn, CRPF, Humaama, C.R.P.F.

Shri Shankar Mishra,
SI, GC, CRPF, Siliguri (WB), C.R.P.F.

Shri N. Sharma,
SI, Securnderabad, A.p., C.R.P.F.

Shri Pradeep Kumar Chhetri,
Comdt., 50 Bn, Srinagar, J&K, C.R.P.F.

Shri Chhaju Ram,
Comdt., ISA CRPF, M-ABU, C.R.P.F.

Shri Sudhir Singh Dogra,
Comdt., ISA, CRPF, M-Abu, C.R.P.F.

Shri Jai Ram Yadav,
2 I/C, GC, CRPF, Gurgaon, C.R.P.F.

Shri Suresh Rai,
S.I., ISA, M-Abu, Rajasthan, C.R.P.F.

List of Awardees of Police Medal for Meritorious Service on the occasion of Republic Day-2007

C.I.S.F.

Shri Sama Gopal Reddy,
DIG, Hyderabad, C.I.S.F.

Shri Sunil Roy,
DIG, Bokoro, C.I.S.F.

Shri Sanjit Das,
SR. Comdt, CISF, Unit Svpia Ahmedabad, C.I.S.F.

Shri Tarsem Kumar,
AIG, CISF, EZ (Hq) Patna, C.I.S.F.

Shri Girdhar Lal Gopa,
Dy. Comdt., CISF Unit VSSC Thumba, C.I.S.F.

Shri Mehar Singh Pathania,
Astt. Comdt., Unit CCIL Tughlakabad, C.I.S.F.

Shri Mohan Singh Bisht,
Astt. Comdt.,CISF, RTC Barwaha, C.I.S.F.

Shri Ravindra Nath Sharma,
Astt. Comdt., CISF, Unit VSSC Thumba, C.I.S.F.

Shri S. Muthu Swamy,
Inspector, 2nd RES Bn, Mahipalpur, C.I.S.F.

Shri Rabindra Nath Das,
Inspector/Min., CISF, Unit, Nalco, Angul, C.I.S.F.

Shri Ram Lakhan Shukla,
SI, RCFL, Mumbai, C.I.S.F.

Shri Manoj Shah Mahangoo,
SI, VSP, Vizag, C.I.S.F.

Shri M. S. Grewal,
SI/MIN, CISF, Unit Mpt Goa, C.I.S.F.

Shri M S Kapase,
Head Const., CISF, Unit CNP Nasik, C.I.S.F.

Shri Bijender Singh,
Head Const., IPGCL/PPCL New Delhi, C.I.S.F.

Shri Shiv Shankar Bhagat,
Head Const., BSL, Bokaro, C.I.S.F.

Shri Shishu Pal,
Head Const., CISF, RTC-1, Deoli, C.I.S.F.

Shri Jagdish Chand,
Head Const., CISF, Unit IGI Airport, C.I.S.F.

Shri S. Venkateshan,
Cook, FSTI, Hyderabad, C.I.S.F.

Shri Sukh Ram, Sweeper,
CISF, Hqrs, New Delhi, C.I.S.F.

C.B.I.

Shri Anil Kumar Ohri,
S.P., EOU-VI, New Delhi, C.B.I.

Shri A. K. Banerjee,
Addl. SP., CBI, ACB, Kolkata, C.B.I.

Shri Ram Mohan Krishna,
Addl. SP., ACB, Lucknow, C.B.I.

Shri P. Rama Mohan Rao,
Dy. SP., ACB, Chennai, C.B.I.

Shri Rajiv Dwivedi,
Dy. SP.,EOU-Vii, New Delhi, C.B.I.

Shri N Krishnamurthy,
Dy. SP., ACB, Chennai, C.B.I.

Shri Syed Bazlullah,
Dy. SP., EOW, Chennai, C.B.I.

Shri K. S. Nageswaran,
Inspector, O/O JD SC-II Delhi, C.B.I.

Shri M. S. Patil,
Inspector, ACB, Mumbai, C.B.I.

Shri Inder Pal Singh,
S.I., CBI, Hq New Delhi, C.B.I.

Shri R. P. Sharma,
ASI, SCB, New Delhi, C.B.I.

Shri P. A. Rane,
Head Const., Eow, Mumbai, C.B.I.

List of Awardees of Police Medal for Meritorious Service on The Occasion of Republic Day-2007

Minstry of Home Affairs

Shri A. M. Kulkarni,
Deputy Director, Mumbai,
Ministry of Home Affairs.

Shri Kulwant Kumar,
Deputy Director, Siliguri,
Ministry of Home Affairs.

Shri T.V. Ravichandran,
Deputy Director, Srinagar,
Ministry of Home Affairs.

Shri B.K. Sidhra,
Addl. Deputy Director, New Delhi,
Ministry of Home Affairs.

Shri N. K. Mendiratta,
Addl. Deputy Director, New Delhi,
Ministry of Home Affairs.

Shri S. S. Sabharwal,
Astt. Director, New Delhi,
Ministry of Home Affairs.

Shri R. S. Kansal,
Astt. Director, New Delhi,
Ministry of Home Affairs.

Shri N. Prabhakaran,
Astt. Director, Bangalore,
Ministry of Home Affairs.

Shri Harjit Singh Bawa,SO,
New Delhi, Ministry of Home Affairs.

Shri B. S. Rawat, Deputy Central Intelligence Officer,
New Delhi, Ministry of Home Affairs.

Shri Nagendra Prasad Singh, D.C.IO, Hatia, Ranchi,
Ministry of Home Affairs.

Shri C. P. Singh,
ACIO-I/G, Lucknow,
Ministry of Home Affairs.

Shri R. K. Agrawal,
D.C.I.O., New Delhi,
Ministry of Home Affairs.

Shri K. D. Sharma,
ACIO-I/G, Jammu,
Ministry of Home Affairs.

Shri B. D. Bhattacharya,
ACIO-I/WT, Itanagar,
Ministry of Home Affairs.

Shri P. K. Gaur, ACIO-I/WT, New Delhi,
Ministry of Home Affairs.

Shri Newal Kishore,
Assistant,New Delhi,
Ministry of Home Affairs.

Shri B. P. Singh,
ACIO-II/G, Koderma (Ranchi),
Ministry of Home Affairs.

Shri C. P. B. Singh,
JIO-I/G, Imphal, Ministry of Home Affairs.

Shri R. Zongsam,
JIO-I/G, Itanagar,
Ministry of Home Affairs.

I.T.B.P

Shri Manoj Singh Rawat,
Comdt. (CW), Mussoorie, I.T.B.P.

Shri Subhash Bhardwaj,
Dy. Comdt., Pegong, Sikkim, I.T.B.P.

Shri Jogender Singh,
AC/GD, Joshimath, Uttranchahl, I.T.B.P.

Shri Matwar Singh,
Inspector/GD, BTC, Bhanu, Haryana, I.T.B.P.

Shri Gurdayal Singh,
Inspector, 5 Bn, ITBP, C/O 56 APO, I.T.B.P.

List of Awardees of Police Medal for Meritorious Service on The Occasion of Republic Day-2007

Shri Ram Prasad,
S.I./PNR, SHQ (Hp) Taradevi, Shimla, I.T.B.P.

Shri Arun Kumar,
Head Const./Gd, 5th Bn C/O 56 APO, I.T.B.P.

Shri Moti Lal Bhandari,
Head Const./ Medic, ITBP Academy Mussoorie,
I.T.B.P.

N.S.G.

Dr. Dinesh Kumar Jain,
Director (Medical), Composite Hospital, NSG,
Manesar, M.H.A. (NSG).

Shri Sunil Kumar Verma,
Gp Comdr. (Comn), HQ NSG, M.H.A. (NSG).

Shri Jai Singh,
Asst. Comdr-1(Min), HQ NSG (Cro), M.H.A.(NSG).

Shri K. S. Rawat,
Asst. Comdr-II, NSG HQ, M.H.A.(NSG).

S.S.B

Mrs. Renuka Mishra,
DIG, T.C., SSB, Gwaldam, M.H.A. (SSB).

Shri V. P. Singh,
Comdt.,18th Bn Birpur, M.H.A (SSB).

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Shri Gulab Singh,
Inspector, TC, SSB, Sapri, M.H.A (SSB).

Shri Onkar Singh,
Head Const., 6th Bn. SSB Girijapuri, M.H.A. (SSB).

Shri Ram Lok, Field
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Shri Gopi Nath Deka,
DIG, FTR SSB, Lucknow, M.H.A. (SSB).

Shri Amarjeet,
AO, G School Ghitorni, M.H.A. (SSB).

BPR&D

Shri Raghubir Singh Negi,
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(BPR&D).

DCPW

Shri B. S. Bajwa,
SSO, ISPW Station, Chandigarh, M. H. A. (DCPW).

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Shri Harish Chandra Sharma,Inspector, NCRB,
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S.V.P. N.P.A

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Shri Madhu Raj Popli,
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Shri A. K. Dixit,
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Cab. Sectt. (SPG)

Shri Virbhan Singh,
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New Delhi, Cab. Sectt. (SPG).

Shri Mohan Lal,
Senior Security Assistant, 9 Race Course Road,
New Delhi, Cab. Sectt. (SPG).

Shri Rudra Kanta Borah,
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