



THE INDIAN POLICE JOURNAL

Volume 68 | Number 1 | ISSN 0537-2429 | January-March 2021

'Promoting Good Practices and Standards'

The Indian Police Journal

Volume 68, Number 1, ISSN 0537-2429

January-March 2021

Board of Reviewers

Shri R.C. Arora, IPS (Retd.)

DG (Retd.) & Former Director (R&D), BPR&D

Shri Alok Kumar Pateria, IPS (Retd.)

Former Spl. DG, CISF

Shri Kuladhar Saikia, IPS (Retd.)

Ex-DG-Assam, Guwahati, Assam

Shri Virender Kumar, IPS (Retd.)

Former DGP (UP, CBCID)

Shri Abhay, IPS

DGP, Odisha Police

Shri Adhir Sharma, IPS

DG & IGP, Railway, West Bengal

Shri Sudhir Mishra, IPS

DG & Dy. State Security Advisor, West Bengal

Dr. Manoj Kr. Chhabra, IPS

Spl. DGP, SAP, Odisha, Bhubaneshwar, Odisha

Shri Vinod Kumar T.K., IPS

ADG (Ant.) SSB, Hqrs., Thiruvananthapuram

Dr. B. Sandhya, IPS

ADGP & Director-KEPA, Thrissur

Shri S Rama Krishnan, IPS (Retd.)

Former ADG, West Bengal

Shri M.P. Nathanael

IG (Retd) CRPF, Arun Vihar

Dr. M.R. Ahemad

Former IG (Prison), A.P.

Shri Sai Manohar, IPS

IG (Vig.), MP Police

Shri Anoop Kuruvila Johan, IPS

DIGP-ATS, Ernakulam

Shri Abhishek Kumar Pandey

Advocate (Supreme Court)

Shri Santosh Mehra, IPS

ADG, BPR&D

Prof. Anil K. Saxena

Former Professor,
SVP NPA, Hyderabad

Prof. (Dr.) Arvind Verma

Professor, Dept. of Criminal Justice,
Indiana University, Bloomington, USA

Shri Rajiv Mohan

Former, Sr. Additional/Spl. Public Prosecutor,
Govt. of NCT of Delhi

Prof. B.N. Chattoraj

Former Professor, Head & Dean (Academics),
LNJN NICFS, New Delhi

Dr. Minakshi Sinha

Reader, Faculty of Criminology,
LNJN NICFS, New Delhi

Dr. J.R. Gaur

Former Director, FSL, Shimla (H.P.)
Presently-Prof./Dir., School of Forensic Science
& Risk Management, Raksha University, Gujrat.

Dr. Ashok Kumar Jaiswal

Dept. of Forensic Medicine & Toxicology,
AIIMS, New Delhi

Prof. Upneet Lalli

Dy. Director, RICA, Chandigarh

Prof. Ashok Kapoor

Former Professor MDI, Gurugram

Dr. Priyanka Vallabh

Asstt. Professor, Organizational Behavior Area,
MDI, Gurugram

Smt. B. Radhika

Dy. Director, Hqrs, NCB

Dr. Jayesh K. Joseph

Criminologist, KEPA, Thrissur (Kerala)

Opinions/thoughts expressed in this journal do not reflect the policies or views of the Bureau of Police Research & Development, but of the individual contributors. Authors are solely responsible for the details and statements made in their articles. BPR&D reserves the right to delete/amend any paragraph or content.



IPJ

The Indian Police Journal

Volume 68, Number 1, ISSN 0537-2429

January-March 2021

Editorial Board

Chief Patron

Sh. V.S.K. Kaumudi, IPS,
DG, BPR&D, MHA,
New Delhi

Editor-in-chief

Sh. Santosh Mehra, IPS,
ADG, BPR&D, MHA,
New Delhi

Managing Editor

Sh. Anurag Tankha, IPS
IG/Director (SPD), BPR&D, MHA,
New Delhi

Executive Editor

Sh. Shashi Kant Upadhyay
DIG/DD (SPD),
BPR&D, MHA,
New Delhi

CONTENTS

S.N.	Title of the Article	Page No.
1.	Autonomous Intelligent UAV System for Criminal Pursuit – A Proof of Concept <i>Akhila Prabhakaran and Ramit Sharma</i>	1-20
2.	Development of Scale for In-charge Police Officers' Performance <i>DCP Rajkumar Shinde and Dr. Supriya Patil</i>	21-34
3.	The Role of Science & Technology in Law – Enforcement <i>K. V. Thomas</i>	35-54
4.	Attitudes as Catalysts for Police Organisational Excellence <i>Prof. A. K. Saxena</i>	55-68
5.	Police Support for Victims of Crime in India: A Quest for Excellence <i>Dr. Nazia Khan</i>	69-84
6.	Scourge of Cyber Fraud during Covid-19: Challenges and Resolutions <i>Dr. Nidhi Saxena and Dr. Veer Mayank</i>	85-108
7.	Police Behaviourial Cauldron - Need for Improvement in Service Conditions <i>RC Sharma & Ishita Sharma</i>	109-119
8.	Non-Invasive / Minimal Invasive Autopsy in Medicolegal Cases: A Need of the Hour and Future <i>Dr. Abhishek Yadav, Dr. Sudhir K Gupta, Dr. Abilash S and Dr. Varun Chandran</i>	120-127
9.	An Empirical Investigation on Identification of Various Factors Affecting Crime against Women in Chhattisgarh, India <i>Ashok Juneja</i>	128-159
10.	The 'Golden Triangle' – A Hub of Narcotics Trade and Its Repercussions for North-East India vis-a-vis The Act East Policy – An Analysis <i>Dr. Aprajita Baruah and Ms. Sharmistha Baruah</i>	160-173
11.	Insights into the Role of Police for Implementation of Domestic Violence Act in India <i>Dr. Alok Sharma</i>	174-187

EDITORIAL MESSAGE

A new dawn of 2021 is full of promises and commitments that keep all of us afloat. We should not remain clung to the past, instead learn and evolve for the good if not better as the year gone by has witnessed. It is like a renaissance for the lucky 2020 survivors; immensely grateful to Him for yet another chance to live, know and revere Mother Nature. It is high time we woke up to the call of Nature and reformed certain things to lead a happy and blissful life.

This edition compiles numerous articles that help the reader know various facets of Police work culture.

We have a large battery of writers and authors with a subtle flair for writing eloquently on the subject they have a tremendous command of. Each issue enables our readers across the country and abroad to give a fair and deep insights into the evolution of IPJ covering varied issues that pertain to forces working round the clock maintaining law and order within the city's underbelly and manning the borders from insurgence and invasion. The group of prolific writers and contributors over decades on end has written a plethora of well-researched stories on varied vital subjects. This issue has once again entertained us with such intriguing pieces.

The Indian Police Journal strives to enrich the reader with informative articles on contemporary policing, administrative, forensic, HR and Police technical issues. IPJ endeavours to promote citizen centric Police services as it is widely known to Police professionals, forensic practitioners, research scholars, academia, management communities, non- government organizations and in the field of correctional administration.

All the articles here without exception are worthy of mention however, a few of them I would like to take note of.

The elaborate piece 'Police Support for Victims of Crime in India: A Quest for Excellence' has mentioned the concept of Victimization. Police supported victims by providing them with various utilities like safety, access, information, support, continuity and voice.

The article on 'An Empirical Investigation on Identification of Various Factors Affecting Crime against Women in Chhattisgarh, India' by Ashok Juneja is vital throwing light on increasing Violence against Women and the problems like Child Marriage, Eve-Teasing, Domestic Violence etc. faced by women.

On the other side we have 'Pharmaceutical Drugs and Crimes: An Explanatory Study' an article

adequately explained. This article talks about the drug trafficking in India and the crimes related to pharmaceutical drugs that trigger the crime graph upward.

Moving towards other insightful pieces we cannot but talk about the article 'Scourge of Cyber Fraud during Covid-19: Challenges and Resolutions' well elaborated by Dr. Nidhi Saxena and Dr. Veer Mayank that has shown a profound insight into the fact of the title. This article talks about the tactics of committing cyber crime and how one can protect oneself from falling prey to it.

Last but not least, the article 'Insights into the Role of Police for Implementation of Domestic Violence Act in India' meticulously written by Dr. Alok Sharma talks about the protection of women from domestic violence and the useful suggestions provided by Police officials for better implementation of the Domestic Violence Act 2005.

I am sure that this edition will definitely give readers an in-depth understanding of the problems surfacing on a day-to-day basis with causes of stress among the personnel in both uniform and civvies. Above all, the ways and means suggested addressing these grave issues.

Finally yet importantly, I would extend my sincere thanks to the Ministry of Home Affairs for their acknowledgement of our endeavours and motivational gesture that really boost our morale and help with our working capacities.

(Editor-in-Chief)

Autonomous Intelligent UAV System for Criminal Pursuit – A Proof of Concept



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Akhila Prabhakaran¹
Ramit Sharma²

Abstract

Rapidly evolving hardware and software technology and innovations have led to utilization of Unmanned Aerial Vehicles (UAVs) across industries around the world. There is a huge opportunity for integrating technology in the adoption of UAVs for assistive law enforcement. This work proposes an integrated flight system-combination of hardware and software, for autonomous, real time, human target pursuit using visual information from a UAV. In this work, commercial UAV devices are explored and evaluated for their use in real time target tracking. Machine learning frameworks for object detection and tracking using computer vision are explored and detailed in this work. These are then integrated into an application framework that could serve as a mobile UAV command controller installed on a Police van. A prototype of the proposed system, designed, programmed using an educational UAV is presented and evaluated in detail with experimental results. Results of this work demonstrate the efficacy of the proposed autonomous system and provide a basis for building futuristic customized UAV frameworks for assistive policing.

Keywords: Policing, Unmanned Aerial Vehicle, Computer Vision, Autonomous, Object Detection, Target Tracking.

1. Introduction, Current Scope and Applications of UAVs

Unmanned aerial vehicles (UAVs) are being extensively used across the world for leisure, travel photography and journalism, surveying and mapping, infrastructure inspection, precision agriculture, express shipment and delivery

and military and policing. Military and law enforcement around the world has been using UAVs as part of reconnaissance, disaster relief, search rescue operations, event management, traffic management and flow, mapping districts and crime scene investigation (Fennelly & Perry, 2020).

Author's Intro:

1. Consultant scientist at the Supercomputer Education and Research Center at IISc, Bangalore.
2. Currently IG, Bareilly Range, U.P.

Law enforcement in India is challenging, in the face of low manpower, clubbed with varied duties discharged by the officials ranging from maintaining law and order, riot control, crime investigation, protection of state assets, traffic control, ceremonial and guard duties, service of summons and production of witnesses, VIP protection, managing and securing political visits, large scale event management and security, festivals and gatherings, anti-terrorist and anti-extremist operations, intelligence gathering and election responsibilities(Randhawa & Narang, 2013).

Technology has provided some relief, with several states having adopted UAVs (Drones) to assist with law enforcement in areas of urban policing, disaster relief and illegal mining(Tanzi et al., 2016).

Drones are being used for aerial surveillance, crowd estimation and management of large-scale gatherings and processions (Kumbh Mela: Advanced Drones to Add More Ammo to Kumbh Mela Preparations | Allahabad News - Times of India, n.d.). Drone cameras are used in sensitive districts to record movement and activities of alleged anti-social elements. Real time intelligence gathered from drone videos allows law enforcement officials to assess threats and formulate actionable strategies for threat mitigation (Anti-CAA Stir: Delhi Police Use Drone to Keep Track of Protesters, n.d.).

Drone navigation for applications such

as traffic monitoring, parcel delivery, surveillance and reconnaissance, drone-based wireless internet delivery, drone taxis, is achieved primarily through human operators. Drones used for assistive policing in India, are also manually navigated by human drone operators under the direction of law enforcement officials.

2. Motivation

As part of regular duties of law enforcement, Police personnel are required to escort undertrial prisoners in a jail van, between the trial court and jail for scheduled court proceedings. During one of these routine hearings in July 2019, in Sambhal district, in Uttar Pradesh, three undertrials escaped from custody, while being transported from jail premises to the trial court, after killing two constables and taking their weapons (Two UP Cops Killed in Sambhal after Miscreants Attack Jail van Escorting Under-Trial Prisoners, Three Criminals Flee Custody - Republic World, n.d.)(Three Escape from Prison van in Sambhal: Gun Used to Kill Constables Sneaked in at Court, Say Police | India News,The Indian Express, n.d.).

The first Police team reached the scene of crime after around 20-30 minutes. Over time, several Police teams and officers visited the spot. The only information for the search mission, however, was a particular direction in which the criminals had absconded. Owing to limited information to begin the search operations, several armed search

teams were deployed in all directions. Relying solely on primitive methods for information dissemination and monitoring resulted in a loss of personnel life in the van, and extensive human effort to chase, interdict and apprehend the criminals. Lack of technological arsenal was observed to be a major challenge throughout this operation, leading to exploration of technological advancements like access to global positioning trackers, Wi-Fi connected systems on board, and UAVs equipped with artificial intelligence and facial recognition software for surveillance and communication providing real time insights into the transport vehicle.

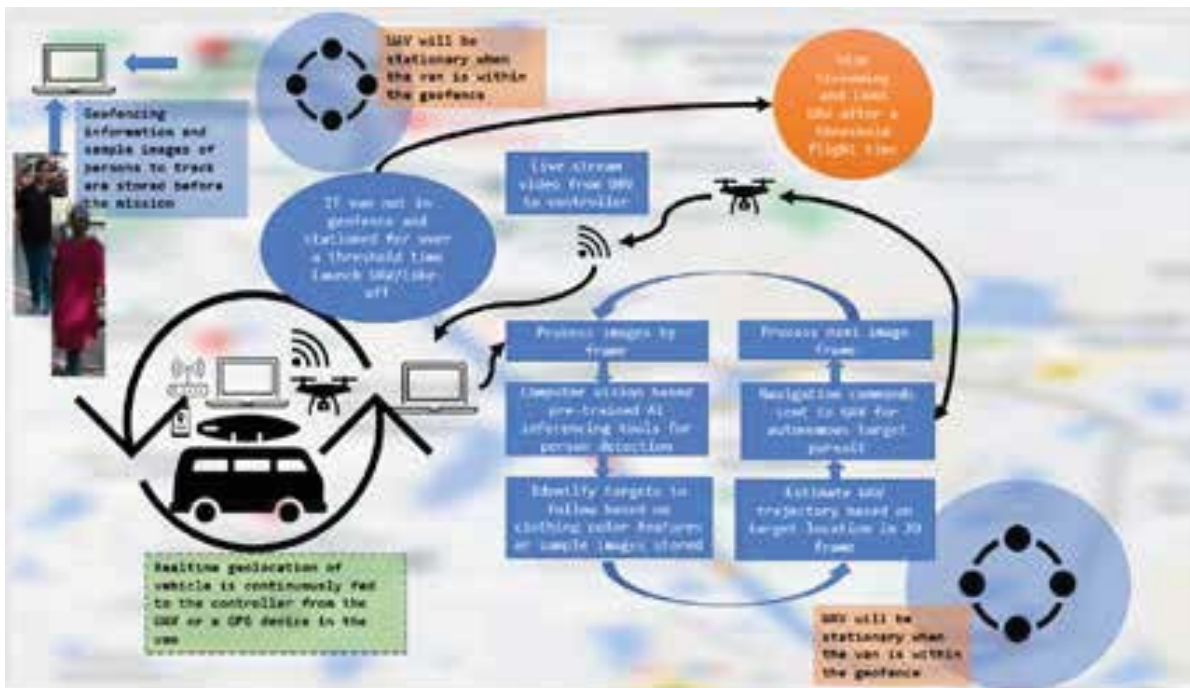
This work aims to answer the following contextual questions in the domain of technology assisted policing.

1. Can UAV systems equipped with object

detection and inferencing tools, and a global positioning system (GPS), be leveraged to track any unscheduled stops made during the routine prisoner transports for court hearing and automatically launch a pre-planned surveillance mission to track and follow targets?

2. Can a low-cost proof of concept be designed for the same to understand its feasibility?

The problem can be partly addressed using GPS devices that will transmit real time location information of the van to a central command and control center. This might however only raise an alarm when the van deviates from the designated route, without giving additional information pertaining to the escape routes of prisoners that is critical to search operations.



UAVs have the advantage of providing a bird's-eye view of the situation without risking safety of Police personnel. Smart surveillance vans with geo-coded flight systems (UAV + GPS) can be programmed to automatically launch a pre-planned surveillance mission when the van deviates from the programmed route. Aerial footage from the UAV, could provide precise information about assailants and details about their escape route, reducing the time taken for on-foot search operations.

This work details a generic low-cost autonomous flight system – hardware and software - capable of:

- a) Automatically launching and landing the UAV based on location based parameters.
- b) Automatically identifying moving human targets (based on pre-trained images or clothing colour features)
- c) Autonomous navigation of the UAV to follow those targets in real-time.

The proposed flight system is detailed in Section 3 and integrated into a programmable hand-held UAV (Section 4) that was trained to detect and follow a target based on computer-vision based machine learning models (Section 5). Experiments of autonomous flights for real-time target tracking have been performed and results have been discussed in detail in Section 6.

3. Low-cost autonomous flight system

A system design for autonomous drone navigation for target pursuit using real-time visual information from the drone camera, is outlined in this section.¹ Figure 1 provides a diagram of the proposed model. The UAV is proposed to be stationed on top of a vehicle, alongside a controller. The controller (a device with inference and GPS capabilities) will be set up with sample images of persons that need to be identified for pursuit. Geofencing code in the controller will initiate take-off and landing of the UAV. After take-off, the drone camera will stream real time video to the controller. A pre-trained machine learning model for person re-identification installed in the controller will process video frames from the UAV. After target identification, based on clothing features, the drone controller will estimate the navigation path of the drone to keep the target in the center of the frame. Drone steering commands will navigate the drone in pursuit of the target.

The two key aspects of the proposed system that will be explored in detail in the next sections, are:

- 1) Hardware -UAV, GPS module and Controller computer.
- 2) Software -UAV connector and controller, machine learning algorithms for target detection, estimation for target pursuit, automatic take-off and landing of the

¹ Image Source: Created by authors for this manuscript

drone based on geofencing.

4. Hardware – UAV and GPS Module

This section evaluates off-the-shelf commercial UAVs that are equipped with autonomous navigation and reviews literature and use cases of a programmable educational drone for experimentation.

UAV module

Autonomous navigation of UAVs relies on on-board sensors, such as Inertial Measurement Units (IMU) and GPS to autonomously navigate the drone along predefined paths. UAVs equipped with GPS positioning systems and autonomous flight path programming can be used to collect real time mission critical information that could be used for short range criminal pursuit and tracking. Most of these drones are commercial range drones that use the “Follow Me GPS Drone Technology”. Most commercial UAVs come with one or more of the following controller options to connect, launch, navigate and land the UAV:

1. controller device for manual operation of the UAV
2. mobile application for common mobile operating systems like Android and IOS that can turn a mobile phone into a controller
3. Software Development Kit (SDK) platform that enables custom programming

Drones equipped to follow a target [Table 1]: can be broadly classified as using either one of the following technologies

Drones that follow a target using GPS Transmitter/ Ground Station Controller (GSC): These devices use a GPS enabled device like a mobile phone, tablet or GSC along with a wearable transmitter or mobile phone and are programmed to follow the transmitter, keeping the subject (person with transmitter) in the frame, at all times (Skydio 2TM – Skydio, Inc., n.d.) (New Release HS720E| Upgrade Image Performance to Professional Level!, n.d.) (Parrot Drones - Applications and Services Adapted to Our Drones, n.d.). These drones work well for planned missions and several use cases can be found on their product site. However, use of drones with this technology can be supported only if the subject – which in this case is a person undertrial can be equipped with a transmitter.

The second category of “follow me” drones is UAVs that use deep learning object recognition technology along with visual sensors for following a target. These drones can follow a target without separate GPS tracker. (YUNEEC Typhoon H Plus | Hexacopter with 1” 4K Camera - Yuneec, n.d.) (DJI Phantom 4 Review | TechRadar, n.d.)(Mavic 2 - See the Bigger Picture - DJI, n.d.) (Mavic Air 2- Specifications - DJI, n.d.) (Skydio 2TM – Skydio, Inc., n.d.) (YUNEEC Breeze 4K | Mini Selfie Drone - Yuneec, n.d.) (Hover2 - The Drone That Flies Itself, n.d.)

UAVs - Features and Comparison Table

	Hyze	HolyStone	Yuneec	Parrot	Skydio	DJI	DJI	DJI	Yuneec
	Tello (for Education)	720	Breeze 4K	Anafi	Skydio 2	Mavic Air 2	Phantom 4 Pro V2.0	Mavic 2Pro	Typhoon II Plus
GPS Enabled	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Return to Home	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Visual Tracking using AI	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Price	99USD	400USD	499USD	699USD	999USD	1049USD	1599USD	1599USD	1899USD
Top Speed	20kph	70kph	18kph	50kph	58kph	68kph	72kph	72kph	48kph
Flight time	13 minutes	26 minutes	12 minutes	25 minutes	21 minutes	34 minutes	30 minutes	31 minutes	28 minutes
Control Range/Max Transmission Distance	0.1km	1.6km	0.1km	4km	1.5km	8km	8km	8km	1.6km
Video Resolution	720p/30fps	4K/15fps	4K	4K/30fps	4K/60fps	4K/60fps	4K/30fps	4K/30fps	4K/30fps
Photo resolution	5MP	8MP	13MP	20MP	12MP	20MP	20MP	20MP	20MP
Control Mode	Mobile App	Mobile App	Mobile App	Remote Controller/ App Navigation	App Navigation/ beacon	Remote Controller	Remote Controller	Remote Controller	Remote Controller
Intelligent Flight Modes/Features	Bounce mode, ED Flips, Throw & Go, Up & Away, and EZ Shots	Follow Me, Orbit, Waypoint	Selfie mode, Orbit Mode, Journey Mode and follow me mode	Follow-me: behind, in front, circle, side, Tap to fly, map navigation	Nvidia Jetson computer system, integrates with Drone Deploy, Skydio Beacon, Motion Track, Cable cam	QuickShots, Hyperlapse, ActiveTrack, Point of Interest, Spotlight, Tripod Mode, Waypoints, Gesture Mode, Course Lock, Home Lock, Draw	QuickShots, Hyperlapse, ActiveTrack, Point of Interest, Spotlight, Tripod Mode, Waypoints	QuickShots, Hyperlapse, ActiveTrack, Point of Interest, Spotlight, Tripod Mode, Waypoints	Follow Me/Watch Me, Flight Path, Point of Interest, Remote platform allows apps like Pix4D
Obstacle Sensing	N/A	N/A	N/A	N/A	overlapping visual sensing - full obstacle detection, true omnidirectional vision, Particularly designed for tracking people and subjects.	Forward Downward Backward	5 directions	6 directions	Sonar for collision avoidance. 3D and depth-measuring technology, Intel RealSense

Most commercial “follow-me” UAVs are equipped with auto take-off, auto-landing and an SDK controller platform that enables custom programming for pre-planned flight paths. During the flight, operated by the handheld UAV controller, the operator can manually select a target to follow, which will then be tracked by the UAV using in-built features.

All the above UAVs are not designed for end-to-end autonomous target tracking and will require additional software modules (specified in the proposed framework in Section 3) for fully autonomous flight systems. Besides, these devices are expensive [Table 1] and could not be used for low-cost proof of principle proposed in this work.

Drone hardware used in proof of concept:

This work explores another category of low-cost programmable (SDK supported) educational drones without a follow-me option, that is predominantly used for research and experimentation of UAV applications (Tezza & Andujar, 2019). Of these, the Ryze Tello (Tello, n.d.) UAV priced at 99USD (14999 INR in India) was explored for use in the experimental setup of the intelligent flight system detailed in this work.

Tello, provides an SDK (SDK 2.0 User Guide 2, 2018) for connecting to the drone from a mobile device, PC or Mac, through a Wi-Fi UDP (User Datagram Protocol) port. Video from the drone can be streamed over the connection and text commands

can be sent to the drone through a socket connected over Wi-Fi to steer the drone.

Measuring 6 x 6 x 1.3 inches and weighing roughly 80 grams, the cost-effective drone is portable and easy to use for experimental purposes. The drone comes with a mobile controller application with a friendly user interface that supports multiple flight modes, automatic take-off or landing. Programmability of the drone controller in Python (Kuhlman, 2012), for streaming and recording video from the drone, made this a suitable experimental drone for validating the proposed model in the work.

UAV Controller Hardware

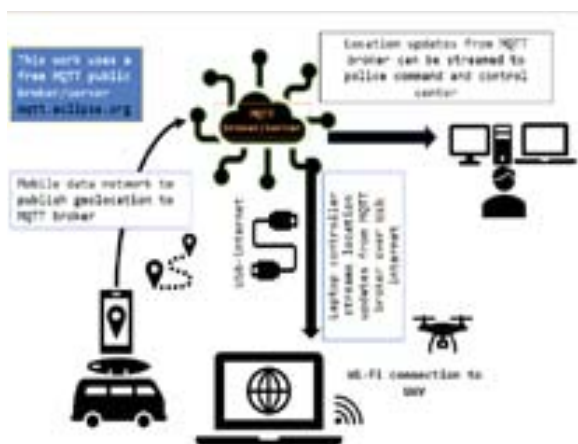
Custom drone navigation programs for autonomous flight operations can be deployed on a laptop or more portable devices like single board computer (Raspberry Pi) or a microcontroller (Arduino) embedded in the UAV.

Another key consideration in designing a working model is evaluating the size of the UAV and its processing capabilities. Since real-time UAV navigation is dependent upon the instructions from the server, network latency and bandwidth can have a significant impact on the proposed model. While larger drones are better equipped to carry payloads with compute-hardware and energy sources, smaller drones for target tracking mission operations rely on the device wireless spectrum, range, and processing capability of the server hardware

In this work, the handheld nano drone does not have processing capability, hence all processing must be offloaded to a server (CPU/GPU or single board controller). For this work, the program is deployed on a laptop [Intel® Core TM i7 7500U CPU @2.7 GHz, Windows10] that connects to the UAV over Wi-Fi. FFmpeg (FFmpeg, n.d.) - a free software project that produces libraries and programs for handling multimedia data is used for streaming data from the UAV to the controller for processing. Video streams from the UAV are relayed to the server (CPU laptop/controller) for data pre-processing and inference, once the data is processed, further instructions for autonomous navigation are sent to the UAV over Wi-Fi.

GPS Tracker

While high-end commercial UAVs equipped with a GPS device have inbuilt capabilities for auto take-off and landing, low-cost UAVs without a GPS receiver can be augmented with an additional GPS module that can be part of the intelligent flight system.



In this work, a mobile phone with a Python program is used as GPS tracker device. The mobile phone has been programmed to periodically publish GPS location information to a publicly available server/broker using the lightweight Message Queue Telemetry Transport (MQTT) protocol (Giambona et al., 2018) (A Light, 2017) . The laptop (UAV controller) will subscribe to these messages and read real-time GPS location of the vehicle from the public server. This real-time feed will be integrated with the UAV controller for autonomous UAV take-off and landing operations. Figure 2

5.1 Software – UAV Connector and Controller for the flight system

For a low-cost working model of the proposed flight system, the controller is a software application written in Python that is installed on a laptop, that will be stationed in the policing vehicle alongside a GPS tracker. Software for the controller consists of the following modules

- a) Set of images of targets that need to be tracked or clothing colour features for target tracking.
- b) Geofencing information that triggers take-off and landing of the UAV.
- c) UAV – Start /Take-off. A GPS tracker on the vehicle will connect to the controller laptop over Wi-Fi and stream real time location information. When the vehicle is outside the designated geofence, the controller will send a command to take-off the UAV.

- d) Connect and stream real time video images from the UAV. Repeatedly ping the UAV at frequent intervals to keep the connection alive. FFmpeg is used for streaming with Open Computer Vision (OpenCV)
- e) Pre-process every frame in the real-time streaming video for best features for subsequent steps of object detection and tracking. This will involve – resizing images, timestamping frames based on time of processing and other parameters that will be required to get best features for subsequent detection steps and store them for post processing analysis.
- f) Machine learning inferencing module for human detection in real time streaming video frames that will show a bounding box around each human object detected in the frame. These will also be stored for post facto analysis, elaborated in section 5.2
- g) Object detection based on a pre-trained machine learning model. One of these targets is then tracked autonomously by the UAV. In our experimental setup, the target with the largest probability is chosen as the subject for following. An alternative to this approach could be, to track the largest object in the target frame (in terms of area of bounding box), if there are multiple targets detected in the frame.
- h) When an object is detected, the position of the object with respect to the current frame is identified, along with the size of the object in terms of height and width of the bounding box. This module then computes the centroid of the target bounding box and the estimated path for the drone to keep the target in the centre of the frame.
- i) The UAV is sent commands to steer left or right, up or down and rotate clockwise or anticlockwise to pursue the target. These parameters are experimentally evaluated for the proof of concept.
- j) Steps from (d) through (i) are repeated for every frame from the real time stream.
- k) Stopping/Landing: In the proposed idea, it will be required for the UAV to trace its path to the vehicle and land on the vehicle when the UAV reaches its threshold battery or if the Police vehicle is in the predefined geofence. Every command sent to the drone in step(g) is recorded to identify the trajectory taken by the drone. These can help trace the path of the drone to the starting point for landing. In the experiment detailed in section 6, the drone is programmed to re-trace its way back to the starting point after a predefined time in flight.

5.2 Software - Machine Learning Algorithms for Human Detection

Overview of algorithms

Target detection (Benenson et al., 2015; Chang et al., 2019; Dalal & Triggs, 2005; Sermanet et al., 2013) is the heart of the proposed framework and underlying technology can be broadly classified as classical methods and deep learning methods for object detection.

Classical object detection methods based on VJ algorithm (Viola & Jones, 2001) and the (Histogram of gradients + Support Vector Machines) HOG+SVM (Dalal & Triggs, 2005) provide good real-time performance for human detection and related approaches have been used extensively in real-time people and vehicle detection from UAV images (Gaszczak et al., 2011) Automatic vision-based navigation of a quad rotor embedded with a Jetson TX2 processor (Arreola et al., n.d.) uses Haar feature based classifiers for face detection. These algorithms are implemented in applications using the OpenCV (Open Source Computer Vision, 2018; Wei et al., 2013). However, many real time applications of object detection based on classical object detection methods are quickly being replaced by deep learning techniques providing higher detection accuracy. (Zhao et al., 2019)

Deep learning algorithms (Krizhevsky et al., 2017) provide a higher accuracy (over 95%) when compared to classical

methods. Object detection in an image using modern deep learning methods essentially consists of two parts:

Neural Network Model: Use a neural network to identify if an object is in an image returning a set of probabilities. Common neural network models are AlexNet (Krizhevsky et al., 2017), ResNet (He et al., 2016), VGG (Simonyan & Zisserman, 2015) and MobileNet (Andrew G. Howard et al., 2009). MobileNet provides a class of light-weight models for mobile and embedded vision applications (NVIDIA Jetson Linux Developer Guide : Introduction | NVIDIA Docs, n.d.)

Detection Method: Locate the position of the object in the picture by drawing a bounding box around the identified object. Common detection methods are SSD (Single Shot MultiBox Detector) (W. Liu et al., 2016), Faster RCNN (Girshick, 2015) and (You Look Only Once) YOLO (Redmon et al., 2016). SSDs (Biswas et al., 2019).

Implementation of these algorithms

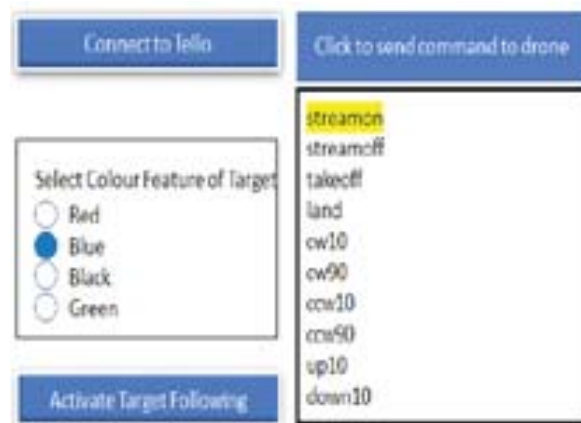
MobileNet SSD is an extension of convolutional neural networks that combines SSD detection method with the light-weight MobileNets to give efficient and accurate results for real time object detection (Andrew G. Howard, Menglong Zhu, Bo Chen, Dmitry Kalenichenko, Weijun Wang, Tobias Weyand, Marco Andreetto, 2009; W. Liu et al., 2016) Deep learning algorithms can be implemented

in application programs by using Tensorflow (Nelli & Nelli, 2018), Keras. (Chollet, 2018), Caffe (Jia et al., 2014), PyTorch (PyTorch, 2019) or MXNet (Chen et al., 2015).

OpenCV implementations of pre-trained models for pedestrian detection using classical algorithms and deep learning algorithms have been implemented in this work, for person detection from real time streaming video from the UAV. Experimental details and results for both these methodologies are discussed in Section 6.

6. Experiment and Results

The proposed flight system has two high level modules – a) geo fencing and location-based take-off and landing of the UAV. b) Realtime streaming, computer-vision based target detection and autonomous navigation of the UAV to follow the target. This system has been experimentally evaluated with manually controlled take off, with a focus on automating UAV navigation for target detection and pursuit. All the experiments of autonomous navigation of the UAV to follow a colour coded individual were performed in a real environment in residential community [Figure 4], over a period of a couple of months, during times of the day when there is no traffic movement and relatively few pedestrian and pet movements.



Results presented here are based on 50 test executions (takeoff, detect, follow, and land cycle) of the drone, that took off from a stationary platform placed near the controller laptop. Controller GUI [Figure 3] allows connection to the UAV, sending commands for streaming, takeoff, landing, forward and back movements, up and down movements, clockwise and anticlockwise movements of the drone. Video from the drone is streamed to a window on the controller for the experiment and subsequently saved for post experimental analysis and improvement after each run.

Standard flight height of 10 meters is used for the drone during takeoff. Tello provides two modes of operation – Slow and Fast. Tello specifications suggest that the drone flies at 20 mph in the fast mode and 8 mph in the slow mode. Slow Mode with the FOV of 59 degrees is used for all experimental runs of the drone in this work.

Takeoff and Landing:



The modular application framework can be customised to easily switch between a fully automatic to semi-automatic mode. Connecting the controller to the Tello and take-off are manually controlled processes in the experiment, while target detection, navigation and landing are automatically handled by the controller application after initial activation. Geofencing code to automatically start and take-off the drone was not implemented because of the short range (~100 meters) of Wi-Fi connectivity to the drone from the controller. For the experiments, the UAV was programmed to land, three minutes after takeoff.

Flight Safety

To ensure an accident-free experiment, the controller checks to see if any human objects in the frame are too close and prints a warning, in addition to sending a command to the drone to move backwards.

Person Detection

Incoming real time drone video stream was processed for pedestrian detection

that returns bounding boxes around all objects detected as humans (pedestrians) in the frame. In our experiments, two state-of-the-art methods – HOG +SVM and MobileNet SSD were employed for person detection and their performance was evaluated based on mean detection speed and mean frames processed per second. In addition, 60 random frames for each detection method, were sampled after the experiment and evaluated for Correctness, Completeness and Quality, defined in [Equation 1].

$$\text{Correctness} = \frac{\text{true positives}}{\text{true positives} + \text{false positives}}$$

$$\text{Completeness} = \frac{\text{true positives}}{\text{true positives} + \text{false negatives}}$$

$$\text{Quality} = \frac{\text{true positives}}{\text{true positives} + \text{false positives} + \text{false negatives}}$$

Table 2: Experimental Results of Target Detection

	HOG+SVM	MobileNet SSD
Correctness	0.59	0.93
Completeness	0.96	0.98
Quality	0.58	0.92
Mean Detection Speed	0.36	0.13
Mean Frames per Second	6.38	9.05

Source: Tello drone experiments detailed in this work

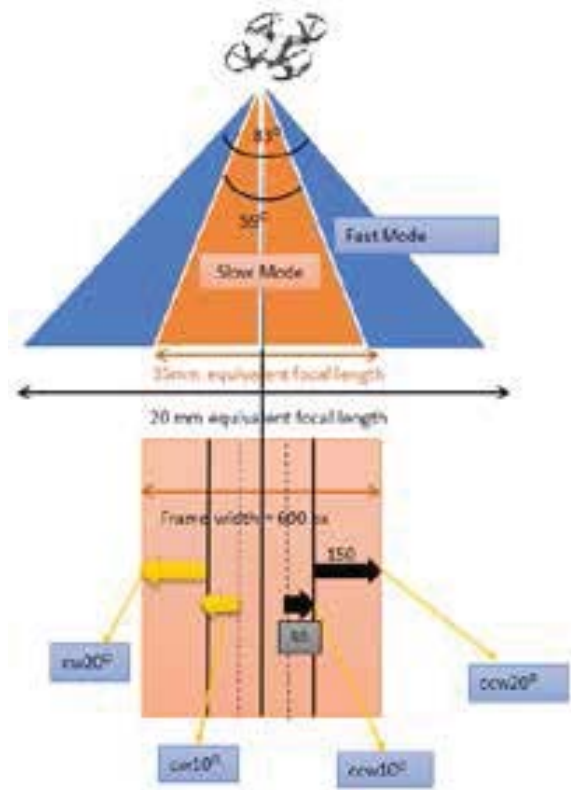
True positives are the number of correctly detected persons, while false positives are number of objects that are not humans but incorrectly detected as humans. False negatives are number of persons that the

detector missed.

- 1) OpenCV's built in HOG+SVM detector for pedestrian detection (detectMultiScale) was used with optimal parameters - sliding windows of size [4,4], padding of [6,6] and scale of 1.05, it was observed that the average time taken for object (pedestrian) detection was 0.36 seconds with an average of 6.38 frames processed per second.

Using the MobileNet SSD multibox detector for person detection, it was observed that the average time taken for object (pedestrian) detection was 0.13 seconds with an average of 9.05 frames processed per second. [Table 2]

Target Filtering based on clothing color features



In real time target pursuit with an autonomous UAV, it will be necessary to train a classifier using one of the several machine learning models discussed in this work that would identify the target in the object detection step. However, for proof of concept of an autonomous UAV for target pursuit, a color-based feature matching was implemented to identify a single target from potentially many humans detected in the previous step. The sample GUI provides a mechanism to select one or more colors that could identify the target's clothing. Experiments have been conducted primarily on single color-coded and dual color-coded targets. Objects enclosed in bounded boxes are filtered by counting the number of pixels of the selected colour(s) in the bounding box and eliminating targets that have a pixel count below a certain threshold.

If there are multiple pedestrians in the frame that qualify the threshold, the one with largest pixel count is selected as the target to be followed by the UAV [Figure 6].

Steering the drone towards the target

After a target is identified based on the object detection and target filtering steps, the controller application automatically steers the UAV towards the target by estimating rotation angle, distance, and direction to move the drone, to keep the target at the center of the frame. Simple target location estimations based on angular field of view information provided by HalfChrome™ (Half Chrome Drones,

n.d.) was used along with extensive experimental trials to identify the optimum horizontal rotation and steering for the drone. Tello camera, operating in slow mode in all experimental runs, has an angular field of vision of 59 degrees [Figure 5].

All images are resized to a width of 600 pixels as part of the pre-processing step. X and Y offsets of the centroid of the target (to be pursued) from the centroid of the image are computed after target detection and filtering. Value of the X-offset determines rotation while size of the target (width and height of the bounding box) determines the forward or backward movement of the drone.

If the X-offset is less than -150px, the drone is rotated clockwise by 20 degrees. If the X-offset is in the range (-50px, -150px), the drone is rotated clockwise by 10 degrees. Similarly, if the X-offset is in the range (50, 150), the drone is rotated counter-clockwise by 10 degrees (ccw 10) and by 20 degrees if the X-offset is more than 150 pixels. The UAV is moved forward by 150, 120 or 100 cms based on the ratio of target height to frame height of less than 0.1, 0.2 and 0.3. If the ratio of target height to drone height is more than 0.8, the drone is moved backwards by 40 cms. These numbers are based on trial runs of drone heights varying from 5 -10 meters. These can be computed and optimized for drones flying at a fixed height.

Logs and Data collected from the Experiment

Detailed logs including complete video from the drone during all trial runs, videos annotated with bounding boxes from object detection and tracking, custom logs that gather information about processing times for each step in the experiment – streaming, detection, filtering, target following, commands sent to the drone have been stored for refining the experiment and controller application.

7. Conclusions and Future Work

Can UAV systems equipped with object detection and inferencing tools, and a global positioning system (GPS), be leveraged to track any unscheduled stops made during the routine prisoner transports for court hearing and automatically launch a pre-planned surveillance mission to track and follow targets?



In the context of the Sambhal incident, this work introduces the hardware and software framework of a low-cost

autonomous UAV system that can launch, and land based on location-based parameters. This integrated system is capable of real-time monitoring of the vehicle transporting prisoners in judicial custody, tracking any unscheduled stops made during the routine transports for court hearings. Additionally, these smart systems could be trained for target detection using machine learning models and programmed for autonomous navigation to pursue detected targets (criminals), as detailed in this work. Existing commercial and educational UAVs for human target tracking are explored in detail for cost and deployment capabilities in the current context. Software for UAV connector and controller and machine learning algorithms for target detection are presented in detail for the proposed framework.

Can low-cost proof of concept be designed for the same to understand its feasibility?

The proposed flight system is experimentally evaluated using a low-cost educational drone with a focus on real time streaming, target detection and auto navigation of the UAV for target pursuit based on clothing colour features. The software systems proposed and experimentally evaluated in this work are generic in functionality and can be used to augment any programmable, off-the-shelf commercial UAV for autonomous navigation. High-end commercial “follow me” drones that have sensors for obstacle avoidance and built-in target tracking

intelligence, could be integrated into the software framework proposed in this work, for on-field experimentation from Police vans.

The model proposed in this work, can be scaled to integrate with UAVs with embedded video processing hardware like Intel Aero Drone and NVIDIA Jetson platforms (Overview of the Intel® Aero Ready to Fly Drone, n.d.) (Jetson Quick Start Platforms | NVIDIA Developer, n.d.). This model also provides flexibility to move from a server-centric processing to a predominantly edge-based model with capability drones (Di Puglia Pugliese et al., 2016; Y. Liu et al., 2019).

What are the implications of this work for law enforcement in general?

While this work targets a particular application of drones for law enforcement for jail van transport, the software and hardware framework and detailed technology presented in this manuscript has wide applications for any vision based real-time monitoring using drones. Some potential applications of this framework for law enforcement are listed below:

- In the jail-van context, the use of a technology-enabled, autonomous, real-time monitoring system will enable the *safety of accompanying Police personnel*, by preventing their direct exposure to dangerous criminals at close quarters.
- *UAV System Equipped vans for LE*: This low budget system has potential to

turn an existing Police vehicle into a smart surveillance system, by using a UAV, laptop, GPS receiver and software stack proposed in this work.

- *Search and Pursuit Operations:* The system is modular and extensible and can be customised for semi-automatic or fully automatic search and pursuit operations and can improve efficiency of policing by reducing time taken for search operations.
- *Real-time monitoring of people and traffic* using autonomous drones deployed at the click of a button, from patrol vehicles.
- *Crowd-monitoring, surveillance and tracking* of objects/people during gatherings and festivals using autonomous drones.
- Drones are increasingly used for aerial surveillance of mining sites and the framework detailed here can be tailored to identify *illegal mining* and facial recognition of people involved.
- The system can be enhanced to support a fleet of drones that can be deployed autonomously as *first responders for emergency situations/ crime scenes*, providing quick, aerial views and real-time videos for increased situational awareness and optimal resource deployment.
- This work is significant in its novelty of application and detailed model proposition and experimental

methodology and can serve as a basis for expert collaboration, sponsorships and building customized solutions for *smart policing*.

Suggestions for implementation/future work

On field experimentation with this proposed framework will require investigation along the following points:

- The Ryze Tello drone used in the experiment is limited in Wi-Fi range and flight duration and is sensitive to small changes in atmospheric conditions like wind. Use of a UAV like the Parrot Anafi or DJI Phantom Pro is recommended for on-field experiments.
- Lack of a GPS module in the educational drone has also been identified as a drawback for the prototype. It will therefore be necessary to incorporate controller features designed in this experiment into a quadrotor equipped with a GPS module.
- Use representative images of people to train a machine learning model for custom target detection and evaluate classical and modern object detection classifiers on the trained model.

The work presented in this report has been self-sponsored and experiments have been conducted in an individual capacity and has potential for expansion with better equipped drones and personnel

for product research and development.

8. Bibliography

A Light, R. (2017). Mosquitto: server and client implementation of the MQTT protocol. *The Journal of Open Source Software*. <https://doi.org/10.21105/joss.00265>

Andrew G. Howard, Menglong Zhu, Bo Chen, Dmitry Kalenichenko, Weijun Wang, Tobias Weyand, Marco Andreetto, H. A. (2009). MobileNets: Efficient Convolutional Neural Networks for Mobile Vision Applications. *Computer Vision and Pattern Recognition*. [https://doi.org/10.1016/S1507-1367\(10\)60022-3](https://doi.org/10.1016/S1507-1367(10)60022-3)

Anti-CAA stir: Delhi Police use drone to keep track of protesters. (n.d.). Retrieved September 5, 2020, from <https://www.indiatoday.in/india/story/anti-kaa-stir-delhi-police-use-drone-to-keep-track-of-protesters-1629729-2019-12-19>

Arreola, L., Gudiño, G., & Flores, G. (n.d.). *Object recognition and tracking using Haar-like Features Cascade Classifiers: Application to a quad-rotor UAV.*

Benenson, R., Omran, M., Hosang, J., & Schiele, B. (2015). Ten years of pedestrian detection, what have we learned? *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. https://doi.org/10.1007/978-3-319-16181-5_47

Biswas, D., Su, H., Wang, C., Stevanovic, A., & Wang, W. (2019). An automatic

traffic density estimation using Single Shot Detection (SSD) and MobileNet-SSD. *Physics and Chemistry of the Earth*. <https://doi.org/10.1016/j.pce.2018.12.001>

Chang, M. J., Hsieh, J. T., Fang, C. Y., & Chen, S. W. (2019). A vision-based human action recognition system for moving cameras through deep learning. *ACM International Conference Proceeding Series*. <https://doi.org/10.1145/3372806.3372815>

Chen, T., Li, M., Cmu, U. W., Li, Y., Lin, M., Wang, N., Wang, M., Xu, B., Zhang, C., Zhang, Z., & Alberta, U. (2015). MXNet: A Flexible and Efficient Machine Learning Library for Heterogeneous Distributed Systems arXiv: 1512.01274v1 [cs.LG]. Dec 2015. Emerald Group Publishing Limited. <https://doi.org/10.1145/2532637>

Chollet, F. (2018). Deep Learning mit Python und Keras: Das Praxis-Handbuch vom Entwickler der Keras-Bibliothek. In *MITP-Verlags GmbH & Co. KG*.

Dalal, N., & Triggs, B. (2005). Histograms of oriented gradients for human detection. *Proceedings - 2005 IEEE Computer Society Conference on Computer Vision and Pattern Recognition, CVPR 2005*. <https://doi.org/10.1109/CVPR.2005.177>

Di Puglia Pugliese, L., Guerriero, F., Zorbas, D., & Razafindralambo, T. (2016). Modelling the mobile target covering problem using flying drones. *Optimization Letters*. <https://doi.org/10.1007/s11590-015-0932-1>

DJI Phantom 4 review | TechRadar. (n.d.). Retrieved September 5, 2020,

from <https://www.techradar.com/in/reviews/cameras-and-camcorders/dji-phantom-4-1322207/review>

Fennelly, L. J., & Perry, M. A. (2020). Unmanned Aerial Vehicle (Drone) Usage in the 21st Century. In *The Professional Protection Officer*. <https://doi.org/10.1016/b978-0-12-817748-8.00050-x>

FFmpeg. (n.d.). Retrieved September 6, 2020, from <https://ffmpeg.org/>

Gaszczak, A., Breckon, T. P., & Han, J. (2011). Real-time people and vehicle detection from UAV imagery. *Intelligent Robots and Computer Vision XXVIII: Algorithms and Techniques*. <https://doi.org/10.1117/12.876663>

Giambona, R., Redondi, A. E. C., & Cesana, M. (2018). *MQTT+*. <https://doi.org/10.1145/3267129.3267135>

Girshick, R. (2015). Fast R-CNN. *Proceedings of the IEEE International Conference on Computer Vision*. <https://doi.org/10.1109/ICCV.2015.169>

Half Chrome Drones - Find the best drone reviews on the internet. From DJI to Autel, from Mavics, Phantoms, Tello and Evos, from photography to FPV we have you covered. Drones, Quadcopters and UAVs, everything RC is here. (n.d.). Retrieved September 7, 2020, from <https://www.halfchrome.com/>

He, K., Zhang, X., Ren, S., & Sun, J. (2016). Deep residual learning for image recognition. *Proceedings of the IEEE Computer Society Conference on Computer*

Vision and Pattern Recognition. <https://doi.org/10.1109/CVPR.2016.90>

Hover2 - The Drone That Flies Itself. (n.d.). Retrieved September 5, 2020, from <https://zerozerorobotics.com/hover2>

Jetson Quick Start Platforms | NVIDIA Developer. (n.d.). Retrieved September 7, 2020, from <https://developer.nvidia.com/embedded/community/quick-start-platforms>

Jia, Y., Shelhamer, E., Donahue, J., Karayev, S., Long, J., Girshick, R., Guadarrama, S., & Darrell, T. (2014). Caffe: Convolutional architecture for fast feature embedding. *MM 2014 - Proceedings of the 2014 ACM Conference on Multimedia*. <https://doi.org/10.1145/2647868.2654889>

Krizhevsky, A., Sutskever, I., & Hinton, G. E. (2017). ImageNet classification with deep convolutional neural networks. *Communications of the ACM*. <https://doi.org/10.1145/3065386>

Kuhlman, D. (2012). *A Python Book: Beginning Python, Advanced Python, and Python Exercises*. Book.

Kumbh Mela: Advanced drones to add more ammo to Kumbh Mela preparations | Allahabad News - Times of India. (n.d.). Retrieved September 5, 2020, from <https://timesofindia.indiatimes.com/city/allahabad/advanced-drones-to-add-more-ammo-to-kumbh-mela-preparations/articleshow/63952938.cms>

Liu, W., Anguelov, D., Erhan, D., Szegedy, C., Reed, S., Fu, C. Y., & Berg, A. C. (2016).

SSD: Single shot multibox detector. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. https://doi.org/10.1007/978-3-319-46448-0_2

Liu, Y., Zhu, C., Deng, X., Guan, P., Wan, Z., Luo, J., Liu, E., & Zhang, H. (2019). *UAV-aided urban target tracking system based on edge computing*. <http://arxiv.org/abs/1902.00837>

Mavic 2 - See the Bigger Picture - DJI. (n.d.). Retrieved September 6, 2020, from <https://www.dji.com/mavic-2>

Mavic Air 2- Specifications - DJI. (n.d.). Retrieved September 6, 2020, from <https://www.dji.com/mavic-air-2/specs>

Nelli, F., & Nelli, F. (2018). Deep Learning with TensorFlow. In *Python Data Analytics*. https://doi.org/10.1007/978-1-4842-3913-1_9

New Release HS720E| Upgrade Image Performance to Professional Level! (n.d.). Retrieved September 6, 2020, from <http://holystone.com/en/blog/ChooseYourDrone/AntiShake4KDrone.html>

NVIDIA Jetson Linux Developer Guide: Introduction | NVIDIA Docs. (n.d.). Retrieved September 5, 2020, from <https://docs.nvidia.com/jetson/14t/index.html#page/Tegra%2520Linux-%2520Driver%2520Package%2520Development%2520Guide%2Fintroduction.html%23>

Open Source Computer Vision. (2018). *OpenCV: OpenCV modules*. OpenCV.

OverviewoftheIntel®AeroReadytoFlyDrone. (n.d.). Retrieved September 5, 2020, from <https://www.intel.com/content/www/us/en/support/articles/000023271/drones/development-drones.html>

Parrot drones - Applications and services adapted to our drones. (n.d.). Retrieved September 5, 2020, from <https://www.parrot.com/en/apps-and-services>

PyTorch. (2019). *PyTorch documentation - PyTorch master documentation*. PyTorch.

Randhawa, G., & Narang, K. (2013). Police in India : Reforms and Employment Status . *The Indian Police Journal*.

Redmon, J., Divvala, S., Girshick, R., & Farhadi, A. (2016). You only look once: Unified, real-time object detection. *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*. <https://doi.org/10.1109/CVPR.2016.91>

SDK 2.0 User Guide 2. (2018). <https://dl-cdn.ryzerobotics.com/downloads/tello/20180222/Tello3.py>.

Sermanet, P., Kavukcuoglu, K., Chintala, S., & Lecun, Y. (2013). Pedestrian detection with unsupervised multi-stage feature learning. *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*. <https://doi.org/10.1109/CVPR.2013.465>

Simonyan, K., & Zisserman, A. (2015). Very

deep convolutional networks for large-scale image recognition. *3rd International Conference on Learning Representations, ICLR 2015 - Conference Track Proceedings*.

Skydio 2™ – Skydio, Inc. (n.d.). Retrieved September 6, 2020, from <https://www.skydio.com/pages/skydio-2>

Tanzi, T. J., Chandra, M., Isnard, J., Camara, D., Sebastien, O., & Harivelo, F. (2016). TOWARDS “DRONE-BORNE” DISASTER MANAGEMENT: FUTURE APPLICATION SCENARIOS. *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*. <https://doi.org/10.5194/isprsannals-iii-8-181-2016>

Tello. (n.d.). Retrieved September 6, 2020, from <https://www.ryzerobotics.com/tello>

Tezza, D., & Andujar, M. (2019). The State-of-the-Art of Human-Drone Interaction: A Survey. *IEEE Access*, 7, 167438–167454. <https://doi.org/10.1109/ACCESS.2019.2953900>

Three escape from prison van in Sambhal: Gun used to kill constables sneaked in at court, says Police | India News, The Indian Express. (n.d.). Retrieved September 5, 2020, from <https://indianexpress.com/article/india/three-escape-from-prison-van-in-sambhal-pistol-used-to-kill-constables-sneaked-in-at-court-Police-5836870/>

Two UP cops killed in Sambhal after miscreants attack jail van escorting

under-trial prisoners, three criminals flee custody - Republic World. (n.d.). Retrieved September 5, 2020, from <https://www.republicworld.com/india-news/law-and-order/two-up-cops-killed-in-sambhal-after-miscreants-attack-jail-van-escorting-under-trial-prisoners-three-criminals-flee-custody.html>

Viola, P., & Jones, M. (2001). Rapid object detection using a boosted cascade of simple features. *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*. <https://doi.org/10.1109/cvpr.2001.990517>

Wei, Y., Tian, Q., & Guo, T. (2013). An improved pedestrian detection algorithm integrating haar-like features and HOG descriptors. *Advances in Mechanical Engineering*. <https://doi.org/10.1155/2013/546206>

YUNEEC Breeze 4K | Mini selfie drone - Yuneec. (n.d.). Retrieved September 6, 2020, from https://www.yuneec.com/en_US/products/breeze/overview.html

YUNEEC Typhoon H Plus | Hexacopter with 1” 4K camera - Yuneec. (n.d.). Retrieved September 6, 2020, from https://www.yuneec.com/en_GB/camera-drones/typhoon-h-plus/overview.html

Zhao, Z. Q., Zheng, P., Xu, S. T., & Wu, X. (2019). Object Detection with Deep Learning: A Review. In *IEEE Transactions on Neural Networks and Learning Systems*. <https://doi.org/10.1109/TNNLS.2018.2876865>

Development of Scale for In-charge Police Officers' Performance



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

DCP Rajkumar Shinde¹
Dr. Supriya Patil²

Abstract

Due to growing socio-political importance of law enforcement agencies, the domain of performance management in Police force has gained serious research interest. This paper is an attempt to develop a scale comprising various antecedents of task performance and job satisfaction of in-charge Police officers (API, PI, and Senior. PI) in Indian context. A well-structured questionnaire was developed and tested on a sample of in-charge Police officers from selected ranges of Maharashtra State (n=107). Exploratory factor Analysis resulted into extraction of four factors (Emotional Factors (EF), Working Conditions (WC), Perceived Organisation Support (POS) and Occupational Stress (OS)), accounting for 47% of total variance. The revised conceptual model theorises that, these four factors emerged acts as antecedents of Task Performance (TP) and Job Satisfaction (JS) of in-charge Police officers. Validating this scale on a larger sample for generalisation of the results would be the future agenda of research. A comprehensive coverage on various determinants of task performance and job satisfaction amongst in-charge Police officers can be considered as one of the major contributions of this study.

Keywords

Police performance, occupational stress, perceived organisational support, task performance, working conditions, job satisfaction.

1. Introduction: Law enforcement agencies play a vital role in terms of managing daily affairs in an economy and works as the watchdog for potential terror attacks or unrest inside the country. Despite socio political importance of this department, the performance management systems

used are largely primitive and based on top down approach of management and command & control culture. In order to bring in the much needed performance based evaluation system in the Police force, leaders such as Shane (2010) developed a customised performance

Author's Intro:

1. PhD Scholar, Savitribai Phule Pune University, Pune, Maharashtra
2. Associate Professor, PUMBA, Savitribai Phule Pune University, Pune, Maharashtra

evaluation system, catering to the specific requirements of the Police organisations. McDonald (2004) developed Comp Stat, the mechanism for information assimilation on crime and effective patrolling to control the crime rate, which is still effective in many advanced Police departments such as NYPD (New York Police Department).

Based on the literature review, we found a consensus amongst researcher fraternity over various determinants of Police personnel's performance outcomes. Antecedents such as occupational stress, working conditions, work-family conflict and emotional factors were found to have significant impact on task performance, job satisfaction and possibility of burnout amongst Police personnel.

Although studies such as Roy et al. (2016), Lambert et al. (2015), Suresh et al. (2013) and Sundaram and Kumaran (2012) explored various determinants of performance outcomes amongst Indian Police force, there seems to be a lack of India-specific scale which considers the effect of all possible determinants of the performance outcomes in a single construct.

This research paper aims at exploring all factors considered as determinants of task performance and job satisfaction amongst personnel of law enforcement agencies. Based on existing literature a conceptual model is developed, which would be empirically tested for the statistical significance. For the said

study, API (Assistant Police Inspector), PI (Police Inspector), Sr. PI (Senior Police Inspector) were considered as the sample respondents. The India-specific scale development for determinants of two performance outcomes (job satisfaction and task performance) would be the major contribution from this research activity. As a part of the future research agenda, the validated scale would be tested on a larger sample size to check the suitability of the model for generalising the results.

2. Literature Review: In order to study various determinants of task performance, job satisfaction amongst the Police officers, a systematic review of the existing knowledge base was conducted. 64 full text peer reviewed research papers were chosen for the study of various dependent and independent variables. It is to be noted that, the studies which have majority of the focus on determinants of performance and satisfaction were considered for the review. The details are as follows:

2.1 Working Conditions: Working conditions refer to all factors relating with the work environment which has an impact on an employee's performance. Panigrahi (2018) concluded that, Working conditions (long duty hours, frequent changes in duty timings), organisational support (inadequate support from the seniors and lack of adequate support from the family) are the major causes of stress. Yadav (2017) conducted a survey on Police personnel in Delhi-India to explore

the causes of work deviant behaviour. It was observed that, excessive working hours, stressful nature of the job do exert a lot of pressure on Police force. Lack of sufficient sleep time was also recorded by the respondents. These all factor result in occupational stress and in tune impact the work performance. The spill-over effect of professional and personal duties forces the officers to complete their personal tasks during office timings, resulting in work deviant behaviour.

2.2 Work Family Conflict: Lambart et al. (2019) conducted a survey to explore linkage between work-family Conflict and Job Burnout among Indian Police Officers. It was concluded that, various aspects of work-family conflict has a spill over effect on health and does result in severe stress. This study also found that, the work family conflict does result in emotional exhaustion. Bano (2011) found that, the lesser time available for family acts as one of the major stressors amongst Indian Police officers along with lower remuneration, lack of government support and excessive work pressure. The spill-over effect of excessive work pressure on time spent with family was found to be evident.

2.3 Perceived Organisational Support: Goswami and Burman (2015) measured the moderating impact of workplace support on job satisfaction and psychological well-being among Police officers in a study conducted in India. The author considered three determinants

of workplace support such as role overload, role ambiguity and physical environment. This study claimed that, the lack of workplace support would result in depression, negative perception about the organisation, leading to impact such as deterioration of health conditions and lower level of job satisfaction. Tyagi and Dhar (2014) studied the impact of organizational politics, work overload and perceived organisational support on stress and health of the sub-inspector rank Police officers. It was found that, the first two factors have negative impact on the health and thus lead to stress while, organisational support helps the officers to relive the stress.

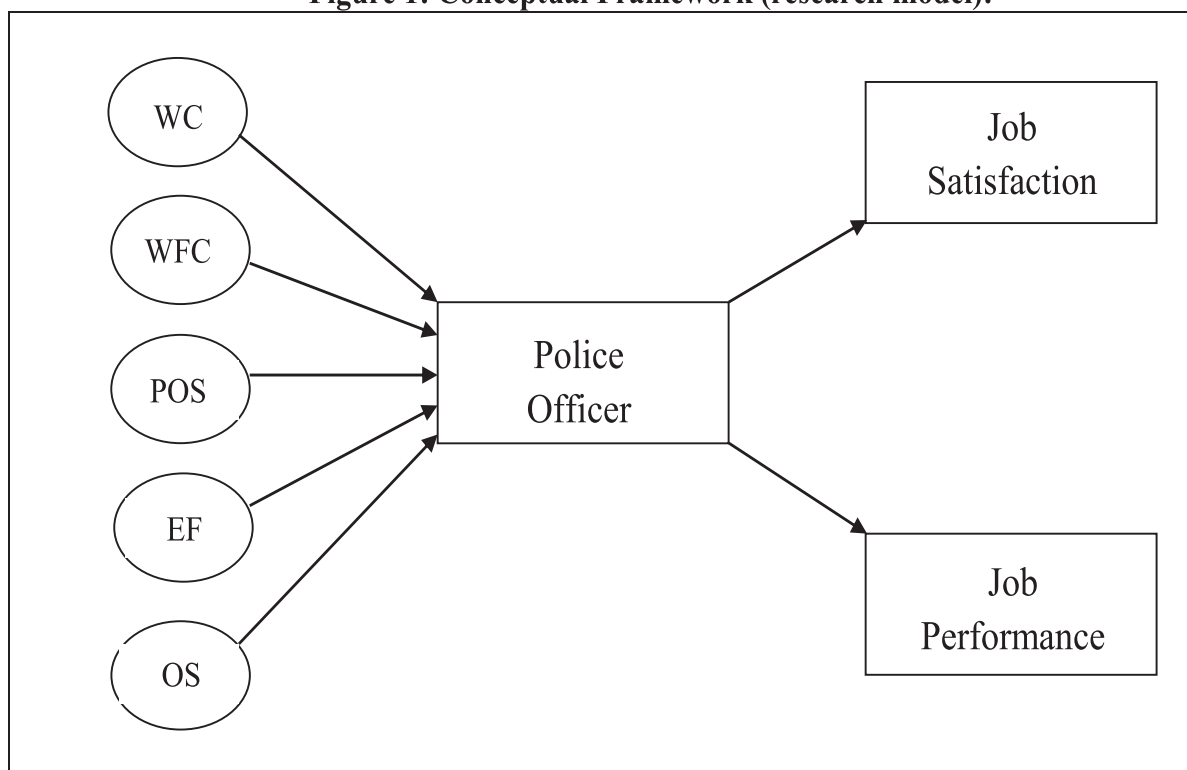
2.4 Emotional Factors: Bakker and Heuven (2006) studied emotionally demanding interactions, as a part of the job profile and its impact on emotional dissonance and in tune on in-job performance. A sample of 108 nurses and 101 Police officers was drawn to test the proposed relationships. The statistical results indicate a strong impact of emotionally challenging situations faced as workplace on perceived emotional dissonance. Later, emotional dissonance was found to be predicting job performance.

2.5 Occupational Stress: Selye (1946) defined stress as "the nonspecific reaction of the body to any type of demand." Occupational stress and its impact or the determinants of this stress is being studied by various researchers in different contextual and occupational settings. Shanmugpriya

(2018) explored relationship between personal factors and its impact on stress amongst Police officers in Tamilnadu. The study concluded that, the female Police workers have greater amount of stress, when compared with their male counterparts. Seolkar et al. (2011) explored determinants of occupational stress amongst Indian Police force and found that, organisational support elements such as criticism by superiors, improper reward system, the feeling of being inadequately valued for abilities and commitments play an important role in building up stress amongst the force.

3. Conceptual Framework: Based on these identified factors and relationships, the conceptualised framework for determinants of job satisfaction and task performance amongst Police officers was formulated. Based on various researches, five determinants of Police performance outcomes such as working Conditions (WC), Work-Family Conflict (WFC), Perceived Organisational Support (POS), Emotional Factors (EF) and Occupational Stress (OS) were proposed having impact on Police officers' task performance and job satisfaction. The proposed framework is presented as Figure 1.

Figure 1: Conceptual Framework (research model):



WC: Working Conditions, WFC: Work Family Conflict, POS: Perceived Organizational Support, EF= Emotional Factors

4. Instrument Development Process:

A critical analysis of literature review provides us evidence of various scales used for conducting research on variables identified. Some previous researchers used already validated standard scales or modified the existing scales by making contextual adjustments. Those adjustments or customisations are based on requirements of particular geographical situation or other demographic details of the targeted population.

4.1 Scaling procedure: A synthesis paper by Shinde and Patil (2019) presented an overview of existing studies on Police performance; which includes stress and its key determinants (along with various other related elements). Taking a clue from this research, a conceptualised model for occupational stress was developed. For developing a new scale, all papers which studied various determinants such as Occupational stress, perceived Organisational Support (POS) and Working Conditions (WC), Work Family Conflict (WFC), Emotional Factors (EF) were collated together. Studies such McCreary and Thompson (2006), Hall et al. (2010), Mostert and Rothmann (2006) and Lambart et al. (2015) were analysed to pool in the statements used for the selected factors. After pooling all relevant items from various scales, a draft questionnaire was developed.

4.2 Expert Opinion Method: In order to achieve face and content validity, the

draft instruments were sent to ten researchers (5 senior ranked officers from Maharashtra Police (Above ACP grade) and 5 academic researchers from Human resources domain (with expertise in performance management). The expert opinion was sought from other senior Police officers and no remuneration was offered to them for their expert advice. Similarly academic scholars working on performance management were consulted for their inputs on the draft questionnaire.

All the experts were briefed about the objectives of the said study and the rationale behind selecting these variables were explained to them. They were requested to rank various statements on the basis of perceived importance felt by them. They were requested to rank the most significant statement as 1 and other statements on the basis of descending order of importance. (1 = most significant and last being the least significant). Ranking given by all experts was collated through MS Excel and necessary changes suggested in statement design were incorporated. The mean ranking for each of the statement was calculated and statements getting a mean score, higher than half of total number of statements were considered.

4.3 Conceptualised scale: Based on scaling procedure, items pertaining to selected determinants were collated from the previously validated scales. Based on the inputs by the senior Police

officers, necessary changes in wording of the instrument were incorporated and the draft questionnaire with 42 items pertaining to seven variables was prepared. The scale and determinant-wise item count is shown as Table 1

Table 1: Proposed Scale and determinants

Sr.	Variable	No. Of Items
1	Working Conditions	7
2	Work-Family Conflict	6
3	Perceived Org. Support	4
4	Emotional Factors	6
5	Occupational Stress	5
6	Job Satisfaction	6
7	Task Performance	8
	Total Items	42

5. Data Analysis: The sample size for pilot study was selected in such a manner that, it would have adequate representation of the target population. Data was collected from 114 respondents (in-charge Police station officers) from selected commissionerates (Mumbai, Pune, and Thane). Out of the obtained data, 7 incomplete sets were dropped and 107 questionnaires were utilised for the pilot study analysis. Out of the total respondents, 83% are graduates while 14% have post graduate degree. 96% of the respondents are male and 91% of the respondents belong to Hindu religion. For the sample, the average no. of years in service stands at 22 years while, the average tenure as a Police station in-charge officer stands at 7.5 years.

5.1 Reliability Analysis: Reliability of the

instruments stands for the consistency with which, an instrument is able to measure, what it is supposed to measure. According to Peter (1979), Reliability is 'the degree to which measures are free from error and therefore yield consistent results'. Index of reliability was introduced by Cronbach (1951). This seminal work developed a formula which could be applied throughout a variety of tests and other measurement instruments - gaining an enormous amount of popularity among practitioners, which is called as Cronbach's Alpha. For the questionnaire of 42 items, overall instrument reliability stands at 0.806, which is higher than the threshold limits (0.7 and above) prescribed by Nunally (1967). This reliability coefficient indicates that, the instrument is appropriate for data collection and analysis on for larger sample size.

Table 2: Construct wise reliability

Sr.	Variable	No. Of Items	Reliability
1	Working Conditions	7	0.829
2	Work-Family Conflict	6	0.696
3	Perceived Org. Support	4	0.833
4	Emotional Factors	6	0.724
5	Occupational Stress	5	0.675
6	Job Satisfaction	6	0.809

7	Task Performance	8	0.911
	Overall Reliability score		0.806

Construct wise reliability indicates the reliability quotient calculated for each of the variable used in the research model. Except statements pertaining to work-family conflict and occupational stress, all other variables scores above the threshold of 0.7 prescribed by Nunally (1967). Since these two constructs stand marginally lower than prescribed threshold, were considered for further analysis.

5.2 Exploratory Factor Analysis (EFA):

EFA is a statistical technique used to reduce the data to a smaller set of summary variables and to explore the underlying theoretical structure of the phenomena. This technique helps the researcher to unearth the latent structure underlying a large set of data. Although, there are various methods under EFA, Principal Component Factor Analysis (PCA) was used in this research. Under PCA, factors are arranged according to the descending order of variance explained. This means, the first component denotes maximum variance and so on.

For factor extraction, five independent variables with 28 corresponding items were considered. EFA was conducted by using Varimax rotation and the factors were extracted through rotated component matrix. KMO (Kaiser Meyer Olkin Measure of Sampling Adequacy) is used as a measure of adequacy. This

indicator tells us the common variance amongst the variables included in the study. High value of KMO that is between 0.5 and 1 indicates the appropriateness of the factor extracted. The results of KMO test and factor analysis are as follows,

Table 3: KMO Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.806
Bartlett's Test of Sphericity	Approx. Chi-Square	1734.2
	Df	378
	Sig.	0.000

The KMO indicator for the study stands at 0.806, which is within acceptable range as per the KMO threshold prescribed by Cemi and Kaiser (1977). Bartlett's test of Sphericity is a measure to prove a significant relationship among the variables considered under the study. According to this indicator, value of significance below 0.05 is considered to be the fit (Pavlou; 2007). As the data analysis indicates Bartlett's Test of Sphericity value as 0.00, data is suitable for statistical analysis.

Table 4: EFA Results

Total Variance Explained									
Comp	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.494	33.906	33.906	9.494	33.906	33.906	4.298	15.349	15.349
2	2.234	7.978	41.884	2.234	7.978	41.884	3.932	14.042	29.391
3	1.973	7.048	48.932	1.973	7.048	48.932	2.841	10.147	39.538
4	1.481	5.288	54.220	1.481	5.288	54.220	2.232	7.972	47.510
5	1.402	5.009	59.229	1.402	5.009	59.229	2.206	7.880	55.389
6	1.280	4.570	63.799	1.280	4.570	63.799	1.764	6.301	61.690
7	1.067	3.811	67.610	1.067	3.811	67.610	1.658	5.920	67.610

Extraction Method: Principal Component Analysis.

Based on the EFA results, four factors were extracted, accounting for 47.5% of the total variance. Since the last three factors could not meet the criteria of minimum three items above 0.5 rotated loading, these factors were dropped from the analysis. Details about four factors emerging out of the process are as follows:

Factor 1: Emotional Factors (EF)– Emotional Factor includes all traumatic situations a Police officer has to face as a part of job profile. Delivering a death message to the deceased person's relatives, taking reporting of a road accident or death coupled with perceived insufficient support from family and friends exert emotional pressure on a Police officer. Since the job of a Police officer comes under the RTI (Right to Information Act), there is always a mental pressure of possibility of an enquiry by the department. These all factors exert emotional pressure on a Police officer. The

factor contributes 15.3% variance.

Factor 2: Working Conditions: In consensus with previous studies such as Panigrahi (2018), working conditions was extracted as one of the strongest factor with contribution of 14.0% to total variance explained. Working condition includes all aspects related with a Police officer's job profile and subsequent problems associated with it. Since there is under staffing in Indian law enforcement domain, necessity to perform office duties even on public holidays or weekly offs, lack of time for physical activity or exercise, handling excessive administrative duties are combined under working conditions. Most importantly, inadequate time to have a meal is also a part of Police officer's working conditions, which sounds an alarming situation.

Factor 3: Perceived Organisational Support (POS)– extraction of POS as one of the major possible determinants of a

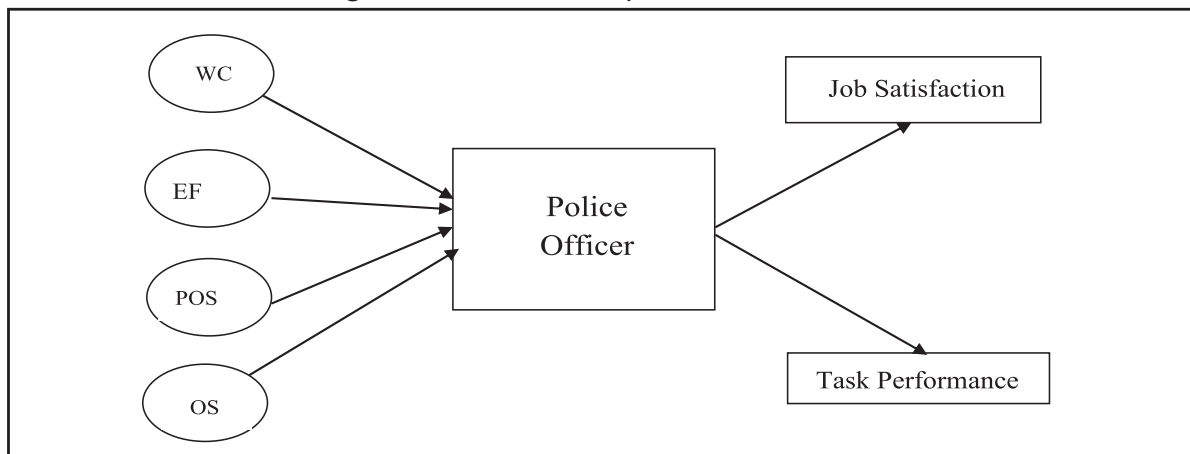
Police officer's performance is in line with the results obtained by Maina & Waithaka (2017) and Rich (2010). POS includes all factors demonstrated by the top management or immediate superior of a Police officer, which may have a positive or negative impact on job performance. The respondents argued that, excessive time taken by the seniors on important matters, doing something as per the senior's orders, even though it is against own wish and differential treatment given to different officers has definitely got an impact on morale of a Police officer. This factor accounts for 10.1% of total variance.

Factor 4: Occupational Stress (OS)- Emergence of Occupational Stress is also in line with previous studies such as Shanmugpriya (2018), which found stress to have an impact on performance of Police officers in India. Vanishing interest to perform a job, perceived a feeling of working on one of the most stressful jobs in the world, feeling like going home in the middle of the duty are included in this factor. It contributes 7.9% to the total variance explained.

The revised scale is presented in Appendix.

6. Conclusions and Discussions: This research paper aimed at developing and validating a scale for determinants of two performance outcomes (job satisfaction and task performance) amongst Police personnel in India. A conceptual framework was proposed and draft questionnaire was tested on a sample of 107 in-charge Police officers from selected commissionerates in Maharashtra state-India. The instrument reliability stood at 0.806, well above the prescribed threshold of 0.7 by Nunnally (1967). In order to unearth latent structure underlying the data, EFA (Principal Component Factor Analysis with Varimax Rotation) was performed. Using rotation loading, four factors were extracted. Factors such as (Emotional Factors, Working Conditions, Perceived Organisational Support and Occupational Stress) were extracted, accounting for 47.5% of total variance explained. Based on the results of factor analysis, a revised conceptual model was proposed, which is presented as below.

Figure 2: Revised Conceptual Framework



The conceptual model theorises that, Working conditions (WC), Emotional Factors (EF), Perceived Organisational Support (POS) and Occupational Stress (OS) would act as determinants of Task Performance (TP) and Job Satisfaction (JS). Although, there have been attempts in the western world to explore performance determinants of Police officers, their applicability in Indian scenario has limitations, considering differences in working conditions. As a result, this research work is expected to propel further investigation in performance of law enforcement agencies in India. The revised conceptual framework would be tested on a larger set of respondents, to check the model fit and generalisation of the findings.

7. References and Citations

1. Bakker, A. B. & Heuven, E. (2006). Emotional dissonance, burnout, and in-role performance among nurses and Police officers. *International Journal of Stress Management*, 13(4), 423.
2. Bano, B. (2011). Job stress among Police personnel. *IPEDR*, 4, 290-3.
3. Cerny, C.A., & Kaiser, H.F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), 43-47
4. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika*, 16(3), 297-334.
5. Goswami, T. G., & Burman, R. (2015). Impact of Work stress on Job satisfaction and Psychological wellbeing amongst Police Officers: Workplace Support as Moderator. *International Journal of Engineering Technology, Management and Applied Sciences*. 257-263
6. Lambert, E. G., Qureshi, H., Hogan, N. L., Klahm, C., Smith, B., & Frank, J. (2015). The association of job variables with job involvement, job satisfaction, and organizational commitment among Indian Police officers. *International Criminal Justice Review*, 25(2), 194-213.
7. Lambert, E. G., Qureshi, H., Keena, L. D., Frank, J., & Hogan, N. L. (2018). Exploring the link between work-family conflict and job burnout among Indian Police officers. *The Police Journal*, 0032258X18761285.
8. McCreary, D. R., & Thompson, M. M. (2006). Development of two reliable and valid measures of stressors in policing: The operational and organizational Police stress questionnaires. *International Journal of Stress Management*, 13(4), 494..
9. McDonald, P. P. (2004). Implementing CompStat: Critical points to consider. *Police Chief*, 71(1), 33-37.
10. Mostert, K., & Rothmann, S. (2006). Work-related well-being in the South African Police Service. *Journal of Criminal Justice*, 34(5), 479-491.

11. Nunnally, J. C., & Bernstein, I. H. (1967). McGraw-Hill series in psychology. Psychometric theory. New York, NY, US: McGraw-Hill.
12. Panigrahi A.(2018). A Study on Job Satisfaction of Women Police Working In Ganjam District, Odisha, India. International Journal of Humanities and Social Science Invention (IJHSSI), 7(!), 63-67.
13. Pavlou, P. A., Liang, H., & Xue, Y. (2007). Understanding and mitigating uncertainty in online exchange relationships: A principal-agent perspective. MIS quarterly, 105-136.
14. Peter, J. P. (1979). Reliability: A review of psychometric basics and recent marketing practices. Journal of marketing research, 16(1), 6-17.
15. Roy N, Maheshkumar K, Indira K. (2016). Assessment of Psychological Stress among Female Police Personnel in Kerala. IOSR Journal of Dental and Medical Sciences (IOSR-JDM). Volume 15, Issue 10 Ver. VI, PP 64-66.
16. Selokar, D., Nimbarte, S., Ahana, S., Gaidhane, A., & Wagh, V. (2011). Occupational stress among Police personnel of Wardha city, India. The Australasian medical journal, 4(3), 114.
17. Selye, H. (1946). The general adaptation syndrome and the diseases of adaptation. The journal of clinical endocrinology, 6(2), 117-230.
18. Shane, J. M. (2010). Performance management in Police agencies: a conceptual framework. Policing: An International Journal of Police Strategies & Management, 33(1), 6-29
19. Shanmugapriya, E. (2018). "Job stress and stress management among Police officers in Tamilnadu." IJMR, 8(9).
20. Sharma, J., Dhar, R. L., & Tyagi, A. (2016). Stress as a mediator between work-family conflict and psychological health among the nursing staff: Moderating role of emotional intelligence. Applied Nursing Research, 30, 268-275.
21. Shinde, R., Patil, S. (2019) Synthesis of Existing Literature on Performance Management in Law Enforcement Agencies. International Journal of Management Studies, 4(2).
22. Sundaram, M.S., & Kumaran, M.J. (2012). A study on coping strategies among Police constables. International Journal of Management, IT and Engineering, 2(12), 153.
23. Suresh, R. S., Anantharaman, R. N., Angusamy, A., & Ganesan, J. (2013). Sources of job stress in Police work in a developing country. International Journal of Business and Management, 8(13), 102.
24. Yadav, P. (2017). Role of Organizational Stress on Work Deviant Behavior: Study on Delhi Police. Psychology in India, 16.

25. Maina, P. M., & Waithaka, P. (2017). Effect of on-The-Job Training on Performance of the Kenya Police Service. *IOSR Journal of Business and Management (IOSR-JBM)*, 19, 64-71.
 26. Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of management journal*, 53(3), 617-635.
 27. Selokar, D., Nimbarte, S., Ahana, S., Gaidhane, A., & Wagh, V. (2011). Occupational stress among Police personnel of Wardha city, India. *The Australasian medical journal*, 4(3), 114.
4. No. of Years of Service as Police station head. (For ex. 7)
 5. Education
 - A. Undergraduate B. Graduate C. Post Graduate D. Above Post Graduate
 6. Gender
 - A. Undergraduate B. Female
 7. Marital Status
 - A. Married B. Unmarried C. Cant Disclose
 8. Are you suffering from any disease? Tick multiple if you are suffering from more than one disease
 - A. Blood pressure
 - B. Heart Disease
 - C. Diabetes
 - D. Any other disease
 - E. No Disease
 9. Religion
 - A. Hindu
 - B. Muslim
 - C. Buddhist
 - D. Others
 10. Please rate following statements based on your views
 - CD= Completely Disagree (1) D= Disagree (2) SD= Somewhat Disagree (3) N=Neutral (4) SA= somewhat agree (5) A=Agree (6) CA=completely agree (7)

Appendix

Revised Scale

This survey is designed for understanding factors which impact on performance of in-charge Police officers. Kindly fill in this questionnaire by taking some time out from your work. Your details and opinions would be kept confidential and would be used for academic purpose (PhD) only. -DCP Rajkumar Shinde- PhD Student, Savitribai Phule Pune University.

1. Name of the officer:
2. Police Station:
3. No. of Years in Service in Police department (Overall). Write in numbers (For ex. 13)

Statement	CD	D	SD	N	SA	A	CA
I need to do office work or duties on holidays or weekly offs, which is stressful							
Not enough support from family and friends is a cause of concern for me							
I feel that I am working on one of the most stressful jobs in the world							
I have been getting promotion as per my qualification and experience							
My supervisor takes into account my wishes							
I do not shy from taking responsibility of the situation							
I like to pick up the tasks which are challenging in nature							
There is always a lack of time for physical activity							
I always accept feedback from seniors or colleagues and ready to make necessary changes							
I feel proud of working in this Police department							
I make sure that my knowledge and skills would be up to date							
I am good at planning and organizing my work							
I always feel that, I am on a job 24*7							
Taking an road accident report/crime report (Panchnama) is a painful activity							
My interest in my work has almost vanished							
I feel that I have an opportunity to present my problems to the seniors in Police department							
Handling Traumatic events (motor vehicle accidents, deaths creates a pressure on me							
I always keep the citizen's interest as my target behind every work activity							
I feel that the different rules apply to different people in Police force							
Everyday, I feel stressed to perform my duties							
I always make sure that, spirit of teamwork would always remain in my team							
Time taken by seniors to take a decision on important matters creates a pressure							
I have full confidence in the management of Police department							
Delivering a death message/accident news to victim's family members puts a stress on me							

Statement	CD	D	SD	N	SA	A	CA
I feel that my job is reasonably secure as long as I do good work							
Missing a meal timings or no time for food is an integral part of my job							
All my work activities are result oriented							
Police job has excessive administrative duties (court visits, escorting)							
I feel that I always have to prove myself to the organization							
Many a time, I feel like going home in the middle of the duty							
There are too many rules and red tapism in working of the Police department							
Being a Police officer, there are always restrictions on my social activities (attending parties etc)							
I am worried about health issues such as back pain, high blood pressure etc.							
Sometimes I need to do things by orders from seniors, even though I do not agree to it.							
There is an unequal sharing of work responsibilities in department							
Fear of a Internal investigations/inquiry always bothers me							

The Role of Science & Technology in Law – Enforcement



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

K V Thomas*

Abstract

The paper, while examining the multidimensional impact created by the technological innovations on the functioning of Police, argues that the present internal security scenario in the country emphasises the need for wider application of new technologies in the field of investigations. It points out that criminal justice can be made more effective by relying on scientific evidence. Delineating the details of the latest technologies in the IT/Cyber space and the forensic world, the paper cites that some of these technologies had been found highly potential in cracking complex cases of multiple nature for which a number of case studies have been incorporated. The legal status and admissibility of forensic and scientific evidence produced through various new methodologies and techniques have been discussed by citing decisions in leading cases connected with such issues/matters. The paper also discusses the major factors impacting the Judiciary not to accept forensic or scientific evidence in many cases. On identifying the main reasons, the writer comes out with a set of suggestions about improving the overall functioning of the criminal justice system particularly the forensic institutions, which inter-alia include: proper strategizing of technology application in the system, enhancement of professional skills and knowledge of key players of the criminal justice system for effective application of new technology, co-ordination and synergy among Police, forensic experts and prosecutors for better appreciation of forensic and scientific evidence, improvement in the functioning of forensic and scientific establishments ensuring adequate manpower, infra-structure, logistics/ resources etc.

Keywords

Science & Technology, Enforcement Security emphasizes, Scientific Evidence, Methodologies, Forensic and Criminal Justice System.

Introduction

In modern world when the organised crime and the criminal syndicates adopt innovative and ingenious techniques to commit crime,

forensic experts, scientists and technicians spend countless hours to analyse vital clues or evidence that would help to reach the actual perpetrators of such crimes. Almost

Author's Intro:

* Assistant Director (Retired), IB.

all disciplines of science including physical and life sciences, computer science and cybernetics substantially contribute to the modern methods of criminal investigation. No doubt, science & Technology has become the most potential professional tool of investigators and detectives. But the crucial question is how far these tools have been effectively used by Law enforcement agencies to professionalise the forces in order to enhance their competence and to meet the myriad of challenges in the core areas of policing?

The governments and Police forces world-over have extensively discussed such questions especially when the Law Enforcement agencies were subjected to public criticism for their omissions and commissions. For example, during most of the 20th century especially in the late 1960s, American law enforcement had come under persistent pull and pressure on lack of 'professionalism'. The professionalization of policing through radical reforms had become a core issue. The report of US President's Commission on Law Enforcement and Administration of Justice (1967)¹ highlighted that the Police and the Law Enforcement agencies suffered a gap between their working procedures on the one hand and the Science and technology on the other. The Commission observed; 'Of all the agencies, the Police traditionally have had the closest ties to the Science and technology, but they have called on scientific resources primarily to help in the solution to specific serious crimes rather than for assistance

in solving general problems of policing'².

Thus, researchers like Lawrence Sherman came out with innovative schemes or mechanisms like 'Evidence-based policing'- basically a 'law-enforcement perspective and philosophy that implicates the use of research, evaluation, analysis, and scientific processes in law-enforcement decision making'³. The core element of this mechanism was that the information from systematic or scientific research as well as rigorous crime analysis should be regularly used and generated by the Police to make both strategic and tactical decisions.

Sherman's works had evinced a lot of interest among other researchers and law enforcement functionaries. Cynthia Lum & Christopher S Koper⁴ examined 'Evidence-based policing' on a multidimensional level and established the inter-relationship between science/ technology and policing in general. They had conceptualized three important dimensions namely, environmental, process and core or output. The environmental dimension basically focuses on the changes in the environment or the society including the profile of crimes and criminals, and the role of science and technology in dealing with such changes. The second one is the process dimension in which the science and technology have greater impact in influencing the Police functions or operations. Naturally, this requires structural changes and adoption or adjustment in the working procedures in the organization. Finally, the output or core

dimension demonstrates the need for better synergy between the Police and the science/technology to achieve success in core areas of policing.

Despite such efforts to professionalize Police through better application of science and technology in the day to day functioning of Police, Law enforcement system has not attained the desired changes in many countries. The best example is the recent case of death of George Floyd, a 46-year-old black American man in Minneapolis, Minnesota, during an arrest. One main criticism was that instead of making the Police more scientific and tech savvy, 'Police today function more like domestic soldiers, using techniques and equipment designed for battle, than community peacekeepers.'⁵

The main focus of this paper is to bring out such bottlenecks in the operation of law enforcement agencies at multidimensional level. Much of the empirical data as incorporated in this study is related to India's scenario. Let us examine the environmental dimension of policing in India. The changes that had occurred in the Indian environment during the last few decades were unprecedented. The challenges in the internal security and law enforcement scenario were manifold. The different shades of terrorism and extremism had virtually terrorised the nation through series of bomb blasts, killings and other holocausts throughout the length and

breadth of the country. The Mumbai bomb-blast (1993), attack on Indian parliament (2001) and 26/11 Mumbai terror-strike, just like 9/11 attack on World Trade Centre (WTC), had attracted the serious attention and concern of the comity of nations fighting against global terrorism.

Cross-border terrorism and infiltration of 'Fedayeen groups' (suicide squads) targeting vital installations and sensitive establishments had added new dimensions to the law and order scenario. There was a steady inflow of sophisticated weapons, a wide range of explosives, and explosive devices from external sources with a network of agents and dealers. Very often nexus existed between such syndicates and other organized crime like smuggling, peddling in drugs and human trafficking. The technology oriented sophisticated crimes like white-collar, computer-manipulated, drug-related, Bank-Insurance-Credit Card frauds, money laundering and rigging up share prices had shown an upward trend. The organised smuggling of gold and other contraband using 'Hawala' channels led to the emergence of a parallel Economy with circulation of a large quantum of black money.

The organized terror and mercenary groups are keener to harness or exploit advancements in the areas of Science and technology in perpetrating their dastardly actions. Intelligence inputs indicate that some of these groups are seriously trying to

lay their hands on nuclear materials or the chemical or biological weapons. The 'cyber-crimes' and ecological crimes such as illegal disposal of and trafficking in hazardous wastes or illicit implantation of genetically engineered organisms in the environment have opened new technology-oriented challenges to Police. The spread of pandemic 'COVID-19' in the country is the latest of the environmental dimension or challenge of Police, in which the Police personnel, just like medical personnel are in the forefront of the fight against the pandemic, risking their own life.

This leads us to the process dimension which essentially requires radical changes in working procedures in tune with new trends or challenges in the law enforcement front. The conventional policing methods or procedures were found to be less successful in countering the threat of organized crimes like terrorism or extremism especially in view of the sophistication and ingenuity attained by the operators. The alternative, no doubt, is better application of science and technology. That is why, Justice (retired) V S Malimath of the Supreme Court of India, who headed a Committee on Criminal Justice Reforms (2003) had aptly commented; as; 'Criminal justice can be made more effective by relying on scientific evidence. It will reduce Police over dependence on witnesses which in turn will bring down the allegations of human rights violations against them'.⁶

For example, the 'Technical intelligence' (Tech-int.) has become a mainstay of intelligence and law enforcement agencies to get into the impregnable terror network such as 'al-Qaeda' or its affiliates. The Artificial intelligence has now emerged as one of the most potential tools of security and enforcement agencies. A number of covert and technology based operations are getting popular in different areas of policing. The surveillance system and intelligence gathering mechanisms are clear examples. The use of Closed Circuit Television (CCTV) at open and public places in order to identify the violators of law has now become very common in many parts of the country especially urban areas. One noteworthy trend is that the Community organisations and Residential Associations extend full support to Police in such proactive endeavours. Similarly techniques such as interception of digital communications, Call Data Record (CDR) analysis etc. have been widely used for investigation of wide range of offences. The wide application of such technologies by a professionally elite force facilitates a better evidence gathering process in the case of organized crimes and other serious offences. Essentially, the output or core dimension of the Police in any country depends much on the judicious application of the modern technologies in the core areas of policing.

The following Table delineating some of the modern technologies demonstrates as how these applications or devices are useful for Police in improving their professionalism and

overall competence in the performance of their tasks including the emerging challenges.

Table-A- Modern technologies/ applications for Police functioning

SI No	Technology	Brief details	Uses in policing
1	Electronic surveillance: (CCTV), image intensifiers, electronic beeps, parabolic microphones; computer usage monitors; electronic mail monitors; cellular radio interception; satellite beam interception; pattern recognition systems; and intruder detector systems (working on vibrations)	Devices like Parabolic microphone amplify sound, Pen registers attached to a telephone line help to identify the telephone numbers being called by a suspect,. Lasers can be used to amplify window vibrations and convert them to audible sound. Night observation devices use infrared radiation or intensify ambient light, Image intensifiers allow individuals to be recognized at 100 meters.'	Fix identity of suspects; Interception of messages; monitor-records/actions, test measure responses in interrogation, polygraph test/ voice- stress analysis/ P-300 brain-mapping etc. ,
2	Computer data matching	Matching millions of records related to convicted, wanted, unidentified, and missing persons, as well as descriptions of stolen articles, vehicles, guns, and license plates within short time.	Used to detect fraud, waste, and abuse and other offenses National Crime Information Center (NCIC) administered by the Federal Bureau Investigation (FBI) holds over 19 million records of convicted, missing,wanted and unidentified besides descriptions of stolen articles, vehicles, guns, and license plates now, used by 64,000 local, State, and Federal agencies. Such data building useful for Police in every country.

SI No	Technology	Brief details	Uses in policing
3	DNA typing;	DNA- nucleotides are sequenced in a different pattern in each individual;	Paternity- identification, fixing identity of suspects in cases such as rape, murder on the basis of crime scene collections
4	Automated Fingerprint Identification System (AFIS)	AFIS computer can within minutes compare a new fingerprint with the massive collections of prints on file and make identifications	Increase the speed and accuracy of Fingerprint processing even in cases involving a large number of fingerprint files. Helps identification of offenders
5	Biometric devices	These devices developed in microchip design help to verify the identity of persons seeking access to controlled data or to secured areas. They help to read fingerprints, palm prints, hand prints, voice and retinal blood vessel patterns	Devices for handwriting analysis have high potential in commercial world, most notably in banking and the use of credit cards, as well as in crime detection
6	Link Analysis Software for Forensic Accountants	Software is a tool to help highlight strange financial transactions. This software combines observations of unusual digital financial transactions	Tracking of illicit financial actions/money-laundering
7	Forensic Carbon-14 Dating	Amount of radiocarbon decreased or increased over a particular period is used to ascertain the age factor	Ascertain the age of unknown remains for archaeological work, identity of victims
8	DNA Sequencer :	This method helps to analyze highly degraded samples of bones or teeth to determine the specific ordering of a person's DNA nucleon-bases.	To identify a person as a possible suspect or criminal even by using degraded samples from crime scene

SI No	Technology	Brief details	Uses in policing
9	Three- D Forensic Facial Reconstruction	Software takes real-life human remains and extrapolates a possible physical appearance.	To fix the identity persons of suicide or homicide or other criminal offences
10	Digital Surveillance For Xbox (XFT Device)	Facilitating visual access to hidden files on the Xbox hard drive.	Unearthing clandestine communications by terror groups etc.
11	Video Spectral Comparator 2000	To decipher obscured or hidden writing, determine quality of paper and origin and "lift" indented writing.	Detection of fraud or false-documents
12	.High-Speed Ballistics Photography	Using a high-speed camera to ascertain the nature of gunshots	To understand how bullet holes, gunshot wounds and glass shatters are created at the scene of crime
13	Alternative Light Photography	A camera such as the Omni chrome uses blue light and orange filters to clearly show bruising below the skin's surface.	To quickly ascertain how much physical damage a patient has suffered through the difference between life and death
14	Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)	Isotopic recognition and matching of even the smallest shard of glass found on clothing to a glass sample from a crime scene	Finding important clues like the direction of bullets, the force of impact or the type of weapon used in a crime

As many of the organised crime syndicates operate beyond the contours of countries or continents, the law enforcement or intelligence agencies, are confronted with the challenge of closely monitoring their clandestine activities, mainly banking on human resources. For example, the attackers of 9/11 who were Jihadists from different countries like Saudi Arabia, Egypt, Germany, France, Yemen etc. held secret meetings across the globe and mobilised finances from different sources for carrying out

their operations. With the spread of global terrorism, such strategies have become the hallmark of many terror-outfits. In the post 9/11 scenario, it was strongly felt that proper synergy between 'human' and 'technical' resources is vital for the success of counter-terror or counter- extremist operations. Thus, the existing technologies such as Electronic surveillance, imaging technology, remote sensing, wiretaps and 'bugs'-most frequently used by law enforcement/ intelligence agencies- have been augmented.

The countries like the United States have developed more sophisticated surveillance technologies to locate and identify the terror suspects for tracking down their movements; monitor and record their communications; intercept their digital communications and finally strike them in their hide-outs. In 'Operation Neptune Spear' (Elimination of Osama Bin Laden) electronic surveillance/satellite imagery, high-resolution images of cities were used to identify individual buildings that matched Bin Laden's life history characteristics and ultimately to target him in the small city of Abbottabad in Pakistan on May 2, 2011.

India, which is one of the worst victims of terrorism, the Law Enforcement and Intelligence organisations depend much on technical intelligence including electronic surveillance techniques to counter the activities of terrorist groups or to investigate terror-related cases. Many new government agencies such as Central Monitoring System, National Intelligence Grid etc. have been formed for surveillance in cyberspace, telephones, email, and personal messages. The Indian Telegraph Act, 1885 and Section 69 Information Technology Amendment Act, 2008 give power to government to intercept, monitor or decrypt any communications or data or information stored on any computer resources for the reason of public safety, public order etc. The Information Technology (Procedure and Safeguard for interception, monitoring and decryption of information) Rules, 2009 regulates the process of monitoring/interception or decryption of communications. Initially,

the power was vested on Home Secretary or Joint Secretary, Ministry of Home Affairs and the agencies namely Intelligence Bureau (IB), Research and Analysis Wing (RAW), Central Bureau of Investigation (CBI), National Investigation Agency (NIA), Central Bureau of Direct Taxes (CBDT), and Narcotics Control Bureau (NCB) were empowered to undertake such operations on specific grounds connected with National Security or public order. However, Rule 4, has been laid down that the central government has power to delegate such authority to intercept, monitor or decrypt any information on any computer resource to any agency. With this provision, interception techniques have been widely used in the investigation of a mosaic of offences such as murder, man-missing, criminal conspiracy, rape, counterfeit/ money laundering etc. besides organised crimes such as terrorism or anti-national activities.

DNA Typing/Profiling has revolutionised the crime-investigation scenario in many countries in the West. Dr. Alec J. Jeffreys, of the University of Leicester in England, working with two other scientists from the British Home Office's Forensic Science Service, first adapted DNA typing for Police use. The technique initially used in determining paternity was subsequently used in variety of criminal cases such as multiple murders, rapes etc. One of the most ambitious projects in DNA-evidence undertaken by the US was the establishment of a national database—the Combined DNA Index System (CODIS). It ensures that DNA samples of new criminals are checked against past DNA profiles of unidentified criminals collected at crime scenes and logged into

the database. On several occasions, this has helped investigators find new leads in decades-old murders that would have, otherwise, likely gone unsolved forever. A number of sensational murder cases which were written off and left in cold storage were detected with the help of this technique. A few such cases are delineated below:

1) Murder of Krystal Beslanowitch, 1995

case 7: Beslanowitch, of Utah, a 17 years old prostitute died from a crushing blow to the skull. Her body was found in 1995 along the Provo River. Leads at the time had led to dead-ends. However, Sheriff Todd Bonner, the chief investigator didn't let the case go. He and other investigators finally got some leading clues in 2013 when new forensic technologies were developed. With extensive effort, they extracted touch DNA from the granite rock that crushed her skull. A tool called a forensic vacuum was used for the DNA extraction. The DNA matched to one Joseph Michael Simpson, who was a resort bus driver in the area at the time. Simpson, then 46, was arrested in Florida in September 2013.

2) Murder of Anna Palmer, 1998 case 8:

10-year-old Anna Palmer was attacked and killed with multiple stab-wounds outside of her own front door in Salt Lake City in 1998. But the investigators had no witnesses, little evidence, and no apparent suspects. In 2009, forensic analysts were called in to assist in the case and they decided to examine the girl's fingernails for DNA samples. Using

visible and alternative light sources to look for DNA not belonging to the girl, they made a hit, and matched it to a man named Matthew Brock, who had lived a block away at the time of the her murder and was then aged 19. Brock was already in prison serving a 10-year sentence for a sex-related crime with a child, and he was found guilty in 2011 to an aggravated murder charge in the death of Anna Palmer. It was DNA evidence that led to his conviction,

3) Multiple rape-murder case in England case 9:

In this case, a suspect was cleared when DNA typing of his blood and of semen taken from the victims' bodies proved that he could not have been the rapist. Police then urged all men in the community between the age of 13 and 30 to provide a blood sample for analysis. Their theory was that about 60 percent of the samples provided could be eliminated by simple blood tests and the rest would be subjected to DNA typing. However, it was not necessary to examine the DNA of 1600 men. Even though in England these blood samples could only be acquired on a voluntary basis, one man, in order to clear himself, persuaded a friend to give blood in his place and under his name. The Police were tipped off and the man later confessed to the murders.

4) Shimla rape, murder case 10:

This was a case detected by the CBI through DNA sampling. 16-year-old Gudiya was gang raped and murdered at Kotkhai, near Shimla. The scene of crime, where the

victim was raped and murdered was a dense forest from where the investigators/ forensic experts collected all the evidence which included liquor bottles, semen samples, blood samples and clay from the crime scene. Later blood samples of over 250 people from the nearby areas were collected to match with the semen and other DNA samples, Later, the CFSL conducted 'percentage test' and 'lineage test' of all 250 samples and it matched the sample of a family from Kangra. The blood samples were collected from both the parental sides. During investigation, it was found that one of the members of family had been absconding since September 2016 and since then he had not been in touch with the family. Thus, the CBI narrowed its search down to 25-year-old Anil Kumar alias Nilu.

It is significant to note that the success of DNA profiling in the investigation of 'dead-end' cases prompted Police/ Forensic institutions to launch special projects. The best example is 'The Denver Police Department (DPD) Crime Laboratory' which serves the City and County of Denver in US and its 550,000 citizens. In 2002, DPD Detectives and scientists from the crime laboratory had launched 'DNA cold case project'¹¹, recognizing the power of DNA technology and Combined DNA Index System (CODIS) to solve cold case sexual assaults and homicides dating as far back as the 1960s. As in 2008, investigators reviewed over 4,242 cold cases and submitted over 955 cases with potential biological evidence to the crime laboratory for testing. Approximately 458 cases have been tested, resulting in

230 DNA profiles submitted to CODIS and 85 CODIS hits, or a 37% hit rate. Over 30 of these cases have been filed with the Denver District Attorney's Office and many have been successfully prosecuted.

The Automated Fingerprint Identification System (AFIS) is a highly efficient and effective tool, capable of scrutinizing vast databases and providing potential fingerprint matches in a matter of minutes. The AFIS has now transformed into the Automated Biometric Identification System (ABIS), providing law enforcement agencies with an even more powerful tool with the new generation of ABIS software and fingerprint examiners that can process multiple complex biometric transactions with high accuracy. The investigation of the murder case of 48 year old Miriam Slamovich¹² a survivor of Nazi concentration camps, at her San Francisco home on February 20, 1978, demonstrated the utility of this modern technology in crime-investigation. She encountered a burglar in the bedroom; the panicked-intruder shot Mrs. Slamovich in the face and she died a month later. The crime scene investigators of the case had little hope of finding the murderer as they had no leads or suspects, only fingerprints left on the windowsill and bedroom window of the victim. The investigators had undertaken the tedious and frustrating process of comparing the latent prints with the thousands of rolled fingerprints cards on file. The odds of finding a match in a database with more than 300,000 prints were remote, but over the next 6 years the officers faithfully spent thousands of hours trying for the same without much success. The Integrated

Automated Fingerprint Identification System (IAFIS), now upgraded to the Next Generation Identification (NGI) is the world's largest collection of criminal history. Maintained by the FBI Criminal Justice Information Service, it contains the fingerprints of more than 143 million criminal and civil individuals at the end of February 2019 according to the FBI monthly fact sheet.

In determining the composition or origin of trace evidence that can rule out suspects or lead to the correct perpetrator, the Alternate Light Source (ALS) devices are of much use. The ALS causes certain materials to fluoresce, which enhances the ability to visualize specific evidence. Evidence illuminated by these light sources can be seen by using a barrier filter, such as goggles, and documented for court purposes with a standard digital camera equipped with an appropriate filter. The advanced technology using Laser Ablation (LA) techniques is used for the collection of physical evidence from minute traces of Glass, paint, paper/ink, hair, tapes, gunshot residue, fires, narcotic sources and soil particles. In this technique, a laser is fired at a sample to ionize a tiny amount of sample and produce a plasma. The light emitted from this plasma can be analysed to determine the presence and concentration levels of elements in the periodic table. This forensic technique is of much application in the collection of evidence in Homicide, Hit and run, Burglary, Counterfeiting and drug-related cases

The latest technology that has been creating big bang in the present millennium is Artificial Intelligence (AI) which is still in

its nascent stages. After three decades of research and development AI has begun to yield commercially available products in the form of expert systems. Some experts believe that expert systems can greatly benefit criminal justice operations, through their ability to institutionalize knowledge and to disseminate rare investigative expertise. Some of the important expert systems being developed for use in criminal justice are: a) Criminal Profiling for Serial Murder and Rape. (The FBI's Behavioural Science Investigative Support Unit at the FBI Academy in Quantico, Virginia USA is engaged in major research in this field); b) Serology Analysis (by the California Department of Justice); c) Narcotics Interdiction.(by the FBI Technical Services Division); d).Counterterrorism(FBI's Technical Services Division.); e) Name Searching System for Various FBI Databases (FBI's Technical Services Division) and f) Organized Crime and Labour Racketeering(nick-named as "Big Floyd" and "Little Floyd," developed by the FBI's Technical Services Division). Except for 'Big Floyd', these expert systems have not yet proved much usefulness in criminal justice operation.

It is relevant to examine the legality of Forensic or scientific evidence in the criminal justice process. In view of the sophistication of crime/ criminals and the scientific and technical advancements to meet such challenges, a number of empirical studies had been undertaken in the West to establish the use of scientific evidence in the investigation and adjudication of cases. One of the most authentic studies in this direction was undertaken by the National Institute of Justice

(NIJ), US department of Justice in 1984. Data were collected from approximately 2,700 case investigations drawn randomly from Police and laboratory files in four jurisdictions. One major finding of this study was that at the Police investigation level, clearance rates of offenses with evidence scientifically analyzed were about three times greater than in cases where such evidence was not used. Similarly, forensic evidence has its greatest effect in cases which traditionally have the lowest solution rates - cases with suspects neither in custody nor identified at the outset of the investigation. Moreover, a significantly higher percentage of people arrested for the crimes of burglary and robbery are convicted in cases with forensic evidence. The effect of scientific evidence on the clearance and prosecution of aggravated assault cases is less pronounced and, in many cases, not significantly different from cases where forensic evidence is not used.

A second companion study¹³ found scientific evidence to have a very limited role in decisions to convict a defendant but had its major effect on sentencing; lab reports, generally led to higher rates of incarceration and was the only type of evidence to influence the length of the sentence. This study found that scientific evidence had a very limited role in decisions to convict a defendant, particularly compared with the effects of admissions, incriminating statements, and tangible (non-scientific) evidence. The presence or absence of scientific evidence had more of an effect on case outcome in otherwise weak evidentiary cases. It was during the stage of sentencing, however, where the forensic evidence had

its major effect on the adjudication of felony cases. While a defendant's prior record overwhelmed most other factors in the incarceration decision, lab reports generally led to higher rates of incarceration and were found to be the only type of evidence to influence the length of the sentence.

The situation is not much different in India where, the application of forensic and scientific evidence to crime investigation and trial has to stand the limitation of law. Three factors namely, the constitutional validity of the techniques, legal position regarding the application of such techniques in crime investigation and the authenticity/reliability of the inputs gathered through such techniques decide the evidentiary value of the Forensic/ scientific evidence. .

For example, Article 20(3) of the Indian Constitution which guarantees fundamental right against self -incrimination provides that no person accused of any offence shall be compelled to be a witness against himself. This article upholds the spirit of Article 11 of the Universal Declaration of Human Rights (UNDHR) which states: "Everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defense" The above .clause is almost on par with the provision of 'right to silence' upheld by US Supreme Court in *Miranda versus Arizona*¹⁴. Article 20(3) is based upon the presumption drawn by law that the accused is innocent till proved guilty. It also protects the accused by shielding him from the possible

torture during investigation in Police custody.

Here a vital question arises as whether Article 20(3) prohibits the Police or the investigating officer to collect forensic evidence from the accused or the evidence so collected is admissible or not? In many instances, educated offenders or those getting timely legal assistance exploit the ambiguities or the lack of knowledge of the investigators on the exact legal position of this clause leading to the destruction of crucial forensic evidence. But, the legal position is quite clear in respect of Article 20(3). In *The State of Bombay vs. Kathi Kalu Oghad & Others*¹⁵, the court held that giving thumb impression, specimen signature, blood, hair, semen etc. by the accused do not amount to 'being a witness' within the meaning of the said Article. The accused, therefore, has no right to object to DNA examination for the purposes of investigation and trial. Further, Section 73 of the Indian Evidence Act empowers the court to direct any person including the accused to allow his finger impressions to be taken. The Supreme Court has also held that being compelled to give fingerprints does not violate the constitutional safeguards given in Art.20 (3).¹⁶

Similarly, the Code of Criminal Procedure, 1973 was amended in 2005 to enable the collection of a host of medical details from accused people upon their arrest. Section 53 of the Criminal Procedure Code 1976 provides that upon arrest, the accused may be subjected to a medical examination if there are "reasonable grounds for believing" that such examination will afford evidence as to

the crime. The scope of this examination was expanded in 2005 to include "the examination of blood, blood-stains, semen, swabs in case of sexual offences, sputum and sweat, hair samples and finger nail clippings by the use of modern and scientific techniques including DNA profiling and such other tests which the registered medical practitioner thinks necessary in a particular case.

The forensic evidence collected through DNA technology has been accepted as crucial piece of evidence in the cases of disputed parentage, murder, rape and other property offenses. In England DNA typing is accepted as conclusive evidence.¹⁷ Its status in the United States is less clear. In a recent case in Florida, a judge admitted DNA "fingerprints" as evidence in a rape case. Scientists testified that semen found in the cervix of the rape victim was "a perfect match" to that of the accused, who could not be identified by the victim and had offered an alibi. The accused was convicted. DNA prints have also been admitted as evidence by judges in Oklahoma, Florida, New York, and Pennsylvania. According to an Associated Press account, most of the defendants who have been confronted with such evidence have pleaded guilty¹⁸.

The situation is not much different In India. In an intense legal battle fought by Rohit Shekhar¹⁹ with his father ND Tiwari – veteran Congress leader and a former Governor of Andhra Pradesh and chief minister of Uttar Pradesh and Uttarakhand - to prove that he was the biological son of Mr. Tiwari, the Apex Court in May, 2012, directed DNA test

to finally settle the parentage dispute. In a number of other cases, the Apex Court and various High Courts have upheld that DNA-evidence is undisputable. In this connection, the observation of the Supreme Court on the admissibility of DNA evidence in *Dharam Deo Yadav v. State of Uttar Pradesh*²⁰ is quite relevant: "Crime scene has to be scientifically dealt with without any error. In criminal cases specifically based on circumstantial evidence, forensic science plays a pivotal role, which may assist in establishing the evidence of crime, identifying the suspect, ascertaining the guilt or innocence of the accused. One of the major activities of the investigating officer at the crime scene is to make thorough search for potential evidence that have probative value in the crime. Investigating Officer may be guarded against potential contamination of physical evidence which can grow at the crime scene during collection, packing and forwarding. Proper precaution has to be taken to preserve evidence and also against any attempt to tamper with the material or causing any contamination or damage". In the sensational Nitish Katara murder case²¹, the identification of the deceased victim was difficult due to availability of only a small portion of one un-burnt palm with fingers. Here also, DNA profile helped in identifying the body remains by matching DNA profile with parents of the deceased which helped the High Court of Delhi to uphold the conviction of the accused.

The evidences produced by enforcement agencies/ prosecution through other forensic or scientific methods were admitted by the Courts. In the sensational

fake stamp paper scam of Mumbai, the Bombay High Court granted permission to the Special Investigation team (SIT) to conduct scientific tests on the main accused Abdul Karim Telgi. In the above case (*Ramchandra Reddy and Ors. V State of Maharashtra*²²), the Court upheld the legality of the use of P300 or Brain finger-printing, Lie detector test and the use of truth serum or narco analysis. In another case *Dinesh Dalmia v State*²³, the Madras High Court held that subjecting the accused to narco-analysis does not tantamount to testimony by compulsion. However, the Supreme Court in, *Selvi & Ors v. State of Karnataka & Anr.*¹⁶²⁴, elaborately discussed the scientific and forensic elements of Narco-analysis, Polygraph and Brain mapping, their application in criminal investigation in different countries and status of leading cases in the West and India and the admissibility of evidence produced through such techniques vis-a-vis constitutional safeguards especially under Article 20(3) of the Constitution. The Court held that these tests were inconclusive and thus their compulsory usage in a criminal investigation would be unconstitutional and questioned the legitimacy of the involuntary administration of certain scientific techniques for the purpose of improving investigation efforts in criminal cases. Thus, consent of the accused or suspect is a legal pre-condition for undertaking such tests.

Another grey area in criminal justice

system is evidence value of digital or intercept materials. In England, the issue was seriously discussed by Courts as early as in 1586 when Mary, Queen of Scots was convicted of treason for plotting to kill Elizabeth I. Among the evidence at her trial were enciphered letters, detailing her knowledge of Babington's plot, which had been intercepted by Walsingham, Elizabeth's Secretary of State and chief spy master²⁵. Although both communications technology and interception capability may have made significant advances beyond that of Walsingham's day, the rules governing the admissibility of intercept material in UK courts are still conservative in nature. Although the UK – like nearly every other country in the world – allows the use of intercepted communications for law enforcement purposes, it is virtually the only country to prohibit the use of intercepted material as evidence to help convict criminals and terrorists. Despite the current UK ban, various loopholes allow the successful use of intercept evidence in UK courts in a limited number of cases. For instance, Ian Huntley was convicted of the Soham murders²⁶ in December 2003 partly on the basis of intercepted telephone calls made between Huntley, his girlfriend Maxine Carr, and Huntley's mother.

After 9/11, intercept evidence has been used in many countries to help convict many of those involved in serious organized crime and terrorism. A typical example FBI-operations against Al Qaeda cells operating in the USA. Thus, in countries like UK where

intercept evidence is not accepted as ground for conviction of offenders including those in terror-related cases, there has been much public debate on the issue. 'A significant number of senior Police officers, prosecutors, judges and politicians in UK have now called for intercept evidence to be used in criminal trials'²⁷.

In India too, such debates were there on the admissibility of electronic evidence in criminal and other offenses. In the wake of growing threat of terrorism and organized crime and wide application of electronic devices like intercept mechanisms for meeting such challenges, the admissibility of intercept evidence has been accepted by Courts with specific grounds/ conditions. Thus in *Mohammed Ajmal Mohammad Amir Kasab v State of Maharashtra & Others*²⁸, the Supreme Court appreciated the electronic evidence, whether in the form of CCTV footage, mobile devices, memory cards, data storage devices, intercepted communications over Voice Over Internet Protocol (VoIP) , IP Addresses, etc. The Court held that 'under Section 65 B of Indian Evidence Act , computer generated electronic records is an admissible evidence at trial if proved in manner specified by section' The Apex Court in other leading cases like *Tukaram S. Dighole v. Manikrao Shivaji Kokate*;²⁹ *Mrs. Nidhi Kakkar v Munish Kakkar*³⁰, *State v. Navjot Sandhu*³¹ and *Anvar PV v P.K. Basheer & Ors*³².

The Apex and other Courts have reiterated that any documentary evidence by way of an electronic record under the Evidence Act can be proved only in accordance with the

procedure prescribed under Section 65B. Thus, a better appreciation of this new section in Indian Evidence Act is required especially in the case of enforcement and Forensic personnel dealing such pieces of evidence. As per Section 65 B, four conditions in relation to the information and computer in question should be satisfied for the admissibility of evidence. These conditions are: a) the computer output containing the information was produced by the computer during the period over which the computer was used regularly to store or process information for the purposes of any activities regularly carried over that period by the person having lawful control over the use of the computer; b) during the said period, information of the kind contained in the electronic record or of the kind from which the information so contained is derived was regularly fed into computer in the ordinary course of said activities; c) throughout the material part of the said period, the computer was operating properly or, if not, then in respect of any period in which it was not operating properly or was out of operation during that part of the period, was not such as to affect the electronic record or the accuracy of its contents; and d) the information contained in the electronic record reproduces or is derived from such information fed into the computer in the ordinary course of the said activities.

As observed by the Supreme Court; "all these safeguards are taken to ensure the source and authenticity, which are the two hallmarks pertaining to electronic record sought to be used as evidence. Electronic records being more susceptible

to tampering, alteration, transposition, excision, etc. without such safeguards, the whole trial based on proof of electronic records can lead to travesty of justice'.³³ It is not the question of electronic records alone, the admissibility of all forensic and scientific evidence by the Courts depends much on the manner how they are collected, handled and produced before the trial courts.

This leads us to a crucial question as how functioning of the Forensic / scientific institutions can be improved and the professionalism, skills and expertise of the personnel can be bettered. In fact, there exists a wide chasm between the projected image of Forensic science and the ground level reality. The media, sci-fiction and some crime-thrillers have romanticized forensic science and created an image of a professional group ready to solve crimes at a moment's notice. But, the reality is much different. Even in advanced countries like USA where Forensic science has been accorded prime importance in crime investigation, routine drug and alcohol identification cases consume more than 70% of laboratory resources, and crime laboratories had more than 500,000 backlogged requests at year end 2002³⁴. In order to improve testing and reduce backlogs, the US Congress has enacted a number of Acts such as DNA Backlog Elimination Act (2000); Paul Coverdell Forensic Science Improvement Act (2003); Justice for All Act (2004); Advancing Justice through DNA Technology Initiative (2003) and

allocated substantial funds to meet the requirements.

The proper fusion of forensic evidence as a major component of our criminal justice system depends much on the professionalism of forensic institutions and availability of proper technologies with professionally competent experts. A 2011 study³⁵ showed that only in 47 cases in Supreme Court and different High Courts; DNA has played an important role. Out of these, 23.4% decisions were given by Delhi High Court alone. Furthermore, DNA evidence had been used in merely 4.7% murder cases and 2.3% rape and murder, Thus more concerted efforts are needed to include scientific evidence in all criminal matters, where ever applicable. Justice V J Malimath Committee on Reforms of Criminal Justice System³⁶ highlighted that application of forensic science in crime investigation in the country is as low as 5-6% of the registered crime cases being referred to the Forensic Science Laboratories (FSLs) and Finger Print Bureau put together.

There are a number of factors influencing the Courts not to accept forensic or scientific evidence in criminal investigation. Manisha Chakraborty and Dr. Dipa Dube³⁷ in their study have brought out many of these reasons such as “mismanagement of physical evidence, including improper collection, preservation, non-collection of clue evidence, non-maintenances of chain of custody, as well as delayed dispatch of physical evidence for scientific analysis has been repeatedly

commented upon by the courts” True to their findings, the investigation of sensational cases are derailed or sabotaged due to such a hap hazardous or indifferent approach of investigators or forensic experts. For example, in a recent drunken driving case in Kerala in which the accused was a senior bureaucrat, the investigating officers- despite pressure from the public and the relatives of the deceased- took around 10 hours since the occurrence of crime to take blood samples which on laboratory test proved negative and virtually defeated the subsequent efforts of the authorities to get his bail cancelled. Many a time, neither the Police nor the lawyer nor even the Judge appreciate fully, the advances or the extensive, promising potentialities of the science and the fusion of new technologies, methodologies, modalities and research. ‘Multi task and multi-professional nature of forensic science needs an inter-professional approach, which is, many a time, lacking’³⁸. On the contrary, turf battles, ego-clashes and personal agenda, on many instances, compel them to make compromises and deviate from ‘due processes.’ Many times, influenced by media trial or public-rhetoric, investigators or forensic experts go beyond the contours of their established norms and charters and try to conceptualize or interpret important forensic findings thereby destroying their evidentiary value during the trial of the cases.

While trying to develop better coordination and synergy among the key players of criminal justice process, steps should be initiated to strengthen the forensic and scientific establishments –both organisationally and professionally. The Central and State

forensic science laboratories which are under the administrative control of the law enforcement authorities (Union Home Ministry and State Home departments) have limitations to launch ambitious projects or new technologies due to paucity of funds or independent administrative or financial powers. The shortage in manpower, infrastructure, logistics and resources adversely affect their efficiency and lead to the pendency of large number of cases. So long as such deficiencies continue, no qualitative improvement in the functioning of these establishments can be expected. That is why, the Report of the Committee on Draft National Policy on Criminal Justice³⁹ emphasized that training, accreditation, standard setting, professionalism and research and development of forensic science should receive adequate attention in the policy framework. The Malimath Committee⁴⁰ and more recently the Justice Verma Committee⁴¹ also emphasised the need of more well-equipped laboratories and proper storage and preservation of DNA samples, especially in sexual assault cases. Let us hope that such reforms or changes would help to develop forensic and scientific establishments an integral part of our criminal justice system.

References

(Endnotes)

- 1 From the Report of the US President's Commission on Law Enforcement and Administration of Justice (1967)
- 2 Ibid, SI No 1,
- 3 Sherman, L. (1998). Evidence-based policing. Ideas in American Policing LectureSeries. Washington, DC: Police Foundation
- 4 Cynthia Lum& Christopher S. Koper& Cody W. Telep 'The Evidence-Based Policing Matrix' Published online: 14 September 2010(https://www.researchgate.net/publication/226648150_The_Evidence-Based_Policing_Matrix last accessed on August 5, 2020)
- 5 Robin Levinson-King,'George Floyd death: Seven solutions to US Police problems' By BBC News 9 June 2020. <https://www.bbc.com/news/world-us-canada-52981634> last accessed on August, 3, 2020
- 6 V S Malimath Committee of ' Criminal Justice Reforms'<https://www.legal-tools.org/doc/70d1c6/pdf/>last accessed on August4, 2020
- 7 <https://www.deseretnews.com/article/865586714/Arrest-made-in-1995-Wasatch-County-cold-case-killing.html> (last accessed on August3, 2019)
- 8 <http://jackrosewood.com/true-crime-anthology-murder-of-anna-palmer/>(last accessed on August3, 2019)
- 9 Anthony Schtitz, "Murder on Black Pad, "Hippocrates,vol. 2, No. 1, January/February 1988, pp. 48-58.
- 10 <https://www.firstpost.com/india/shimla-rape-and-murder-case-painstaking-investigation-advanced-dna-mapping-helped-cbi-nab-accused-4446025.html> (last accessed on July 27, 2019)

- 11 <https://www.promega.com/-/media/files/resources/conference-proceedings/ishi-18/oral-presentations/berdine.pdf?la=en> (last accessed on July31, 2019)
- 12 Criminal Justice: New Technologies And The Constitution' Benjamin Netanyahu, Diane Publishing (1988)
- 13 The Role and Impact of Forensic Evidence in the Criminal Justice Process (US Dept. of Justice)-2010 (<https://www.ncjrs.gov/pdffiles1/nij/grants/231977.pdf> last accessed on July 31, 2019)
- 14 Miranda v. Arizona, 384 U.S. 436 (1966)-
- 15 3AIR 1961 SC 1808, 1962 SCR (3) 10.
- 16 Gaurav Aggarwal, Smart Study Series Forensic Medicine & Toxicology 73 (ELSEVIER A division of Reed Elsevier India Private Limited, Gurgaon Haryana, 2009).
- 17 'Having Holmes in the Dust,' Newsweek, Oct. 26, 1987, p. 81
- 18 'Admission of DNA Fingerprints Prompts Queries,' National Law Journal, Jan. 18, 1988
- 19 <https://www.indiatoday.in/india/story/who-is-rohit-shekhar-the-man-who-fought-paternity-battle-with-father-nd-tiwari-1503476-2019-04-16> last accessed on August 6, 2019.
- 20 2014 (5) SCC 509
- 21 Vishal Yadav v. State of Uttar Pradesh (2014) SCC Online Del. 1373.
- 22 2004 All MR (Cri) 1704
- 23 2006 Cri. L. J 2401
- 24 AIR 2010 SC 1974
- 25 Intercept evidence: Lifting the Ban a Justice Report' October 2006, Eric Metcalfe, Director of Human Rights Policy email: emetcalfe@justice.org.uk direct line: 020 7762 6415
- 26 <https://www.telegraph.co.uk/news/0/soham-murders-ian-huntley/> last accessed on 2/8/19
- 27 Ibid, Sl. no 22.
- 28 (2012) 9 SCC 1)
- 29 (2010) 4 SCC 329 ("standard of proof" in the form of electronic evidence should be "more accurate and stringent" compared to other documentary evidence')
- 30 (2011)162 PLR113 "If person produced text of information generated through computer, it should be admissible in evidence, provided proof was tendered in manner brought through Evidence Act..."
- 31 (2005)11 SCC 600 : "Printouts taken from the computers/servers by mechanical process and certified by a responsible official of the service providing company can be led in evidence through a witness"
- 32 CA No. 4226 of 2012 "Any documentary evidence by way of an electronic record under the Evidence Act, in view of Sections 59 and 65A, can be proved only in accordance with the procedure prescribed under Section 65B"
- 33 Ibid Sl No 29.

- 34 Peterson and Hickman, 2005; Durose, 2008
- 35 Dr. Nirpat Patel, Vidhwansh K Gautaman, ShyamSundarJangir, The Role of DNA in Criminal Investigation Admissibility in Indian Legal System and Future Perspectives, 15-21 IJHSSI Vol. 2 (2013).
- 36 Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs, Report, Volume 1, March 2003.
- 37 'Applicability of Forensic Science in Criminal Justice System in India' ManishaChakraborty & Dr. Dipa Dube (<http://vips.edu/wp-content/uploads/2017/07/Forensic-Science.pdf> last accessed on August 6, 2019)
- 38 Justice Jitendra N. Bhatt, "A Profile of Forensic Science in juristic journey" (<http://www.ebcindia.com/lawyer/articles/2003v8a4.htm> (last visited on 8.8.2019)
- 39 Report of the Committee on Draft National Policy on Criminal Justice, Ministry of Home Affairs, Government of India, July, 2007.
- 40 Ibid SI No 36
- 41 Report of the Committee on Amendments to Criminal Law, 23rd January, 2013.

Attitudes as Catalysts for Police Organisational Excellence



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Prof. A. K. Saxena*

Abstract

In this paper, concept, functions and three components of attitudes have been discussed. Attitudes crucial for Police organizational excellence Viz. Attitude to Self, Self-esteem, Self-efficacy, WHO definition of health; attitudes to significant others, learning and change, organization, quality of service etc. have been identified. Various training interventions for attitudinal development have been recommended. Communication of right knowledge about the attitudinal objects results in developing appreciation for the concepts for behavioural change. Use of case-studies, role-playing management games and storytelling has been stressed for attitude development. Non –training interventions have also been communicated in this paper.

Key terms: Attitude, Organizational excellence, self-esteem, self-efficacy, attitudinal development, Training and Non training interventions.

1. Introduction

Great Zig Ziglar (2016) said, "It is your attitude and not your aptitude that will determine your altitude".

As Zig Ziglar points out in the quote that our attitude determines our altitude meaning thereby that the **key to success really is to 'Have a positive attitude'**.

What is altitude in life? The altitude which is reflected in our life is measured in terms of our quality of Being in all the dimensions of personality-physical,

social, emotional, spiritual and thinking including our self-esteem. On the relationship plane altitude is in terms of our value in the minds and hearts of people around us. The people may be at homes, organizations and the society. They may with pride say that 'what a great person he is! Attitudes determine our effectiveness in our precious lives. Attitudes are manifested mostly in our behavior.

The height of professional attitudes has been displayed by the Police during the

Author's Intro:

* Former Professor, S.V.P. National Police Academy, Hyderabad

Covid 19 Pandemic. Their exemplary dedication, commitment and service attitudes were evident. Following behaviours of them are worth mentioning:

- Performing duty round the clock.
- Controlling the violators of lockdown guidelines with heavy hands.
- Serving the people to reach the hospitals.
- Advising the public through announcements and singing songs.
- Controlling the unruly mobs indulged in attacking the Doctors, Nurses and fellow-Policemen.
- Celebrating birthdays and marriage anniversaries of senior citizens.
- Without bothering for their own health life served the people.

Human face of Police was observed by the country with gratitude to them (Thousands of them have been infected by the corona.

Keeping Police in view, the author wishes to answer the following questions-

- How to define attitudes, their functions and various components? What is the relationship among perception, beliefs, attitudes, values and personality? How these covert aspects are visible in our behavior (overt)?
- With reference to Police what are the desirable attitudes among Police

officers?

- What are the 'Training' and 'Non-training' interventions for the development of attitudes? What will be the role of Police officers; leaders and organization in developing the right attitudes?

To answer the above-cited questions, the author has followed the below -cited outline to develop this paper:

- Concept and the dynamics of attitudinal development.
- Functions and components of attitude
- Police and attitudes- A classification.
- Training and non-training interventions of attitude development.

2. Concept and the dynamics of attitudinal development

A few definitions of 'Attitude' are presented below.

- Attitudes are likes and dislikes – favourable or unfavourable evaluations of and reactions to objects, people, situations, or any other aspects of the world including abstract ideas and social policies.
- Allport (1935) has described attitude as a latent psychological construct.
- In psychology, attitude is a psychological construct, a mental and emotional entity that characterizes a person.'

- In Social Psychology, an attitude is an evaluation object ranging from extremely negative to extremely positive.

An attitude can be a positive or negative evaluation of people, objects, events, activities, and ideas. It could be concrete, abstract or just about anything in our environment.

Jung's definition of attitude is a "readiness of the psyche to act or react in a certain way".

The main attitude dualities that Jung (1921) defined are the following:

Consciousness and the Unconscious. The presence of two attitudes is extremely frequent, one conscious and the other unconscious. This means that conscious men have a constellation of contents different from that of the unconscious—a duality. The conscious mind contains all the thoughts, memories, feelings and wishes of which we are aware at any given moment. This contains our memory too. Whereas the unconscious mind is a reservoir of feelings, thoughts, urges and memories that are outside our conscious awareness. Most contents are unacceptable or unpleasant such as feelings of pain, anxiety or conflict. In Police training, the author feels that two specific aspects may be considered for inclusion –

- Memory training (to strengthen conscious mind).

- Mindfulness training (Vipassana)/ conflicts (to reduce anxiety and inner conflict).

Extroversion and Introversion: This pair is so elementary to Jung's theory of types that he labeled them the "attitude types". Extroverts are outgoing, talkative, energetic and more towards people engaging themselves in meaningful instruction whereas introverts are more reserved and solitary. In Police, we require officers with more extroversion so that they make good teams and enjoy better interpersonal relationships. A Police officer with extroversion will be able to elicit better Police-public interface to ensure better public participation in Police.

Rational and Irrational attitudes. "It conceives reason as an attitude. The rational attitude subdivides into the Thinking and Feeling psychological functions. Police Officer, if he is rational, will make decisions based on logical thinking, facts, data and analytical thinking. Ethics becomes the core of his rational behaviour with the less room of emotionality. Jumping from the norms and values of Police is classified as irrational behaviour. Not following the mission and the vision of Police organization falls under irrational behaviour. Spinning money, as a bribe, falls under irrational behaviour.

On analyzing above-cited definitions, we can conclude that:

- Attitude encompasses favourable or unfavourable reactions to objects, people, situations, abstract ideas and social policies.
- It is a latent (covert) psychological construct.
- It is an emotional and mental characteristic that characterizes a person.
- 3 attitudes pairs were classified by Jung are 'Consciousness and Unconsciousness' Extroversion and Introversion'; Rational and Irritational attitudes '
- Attitudes are 'Positive', 'Negative' and 'Neutral

Below cited diagram may be considered to understand the relationship among Perception, Beliefs, Attitude, Values , Personality and ultimately the behavior :

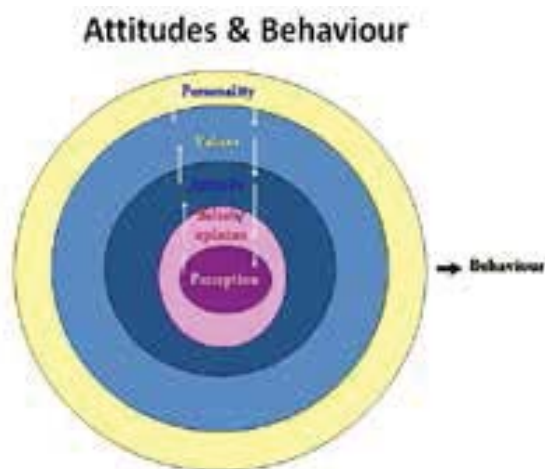


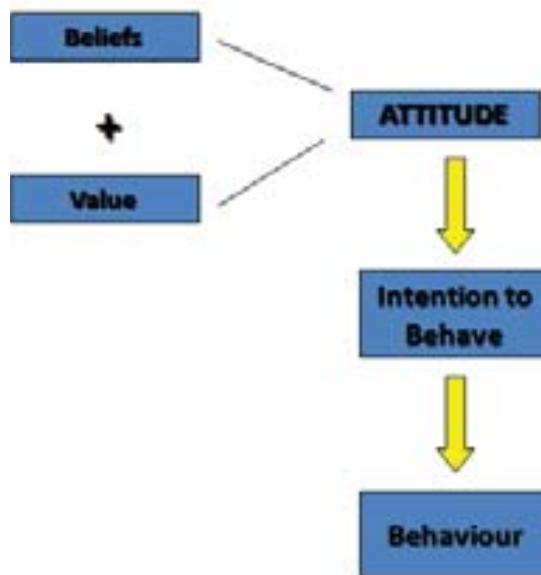
Diagram 1: Personality and behavior

Perceptions give rise to beliefs/opinions, attitudes, values which in turn shape our personality. Later on ,Personality

guides our values attitudes, beliefs and perceptions. These all inside the concentric circles are covert. Behaviour, which is overt(observable), is caused by these covert processes. Suppose a Police Officer perceives poor people as unimportant , his beliefs, attitude and values will be shaped as negative and his personality will reflect discriminatory behaviour towards the poor. It is undesirable in Police Officer. In Police training, shaping of right personality traits is stressed so that the officer may not become discriminatory in the field

Diagram 2 depicts beautifully as to how the behavior is caused by attitude.

Diagram 2: Attitude and Behaviour



Our 'intention to behave 'well towards the public, seniors, juniors etc. is mostly determined by our belief and value system. Attitudes play a vital role in our behaviour response.

Components of attitude: In literature, three components of attitude are described:

Cognitive(Knowledge) component : The cognitive component of attitudes refers to the beliefs thoughts, and attributes that we would associate with an object. Many times a person's attitude might be based on the negative and positive attributes they associate with an object.

Affective component of attitudes refers to your feelings, emotions linked to an attitude object. Affective responses influence attitudes in a number of ways.

Behavioural component: The behavioural component of attitudes refers to the way the attitude we have which influences as to how we act or behave.

These concepts will be more clear by considering the below- cited Diagram 3.

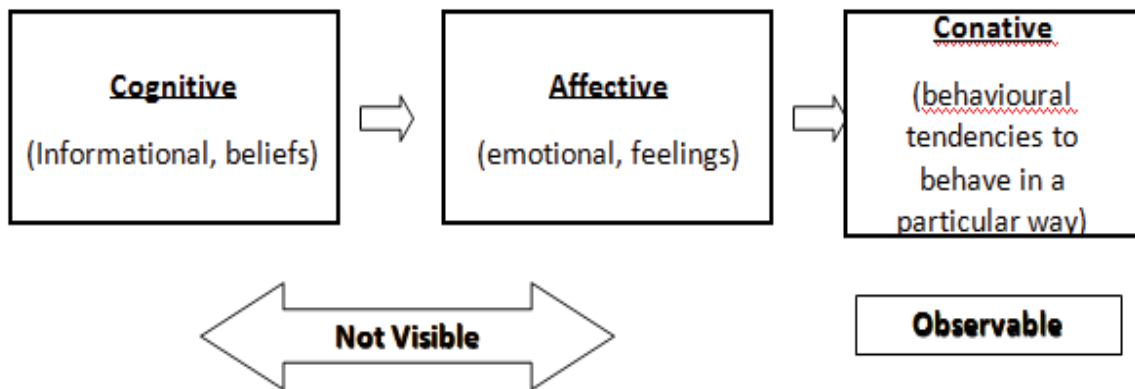


Diagram 3 : Components of attitudes

In the Bhagwat Gita these are beautifully described as Gnana, Bhakti and Karma. These concepts will be more clear by considering the above- cited Diagram 4. Cognitive component of attitude is strengthened by right knowledge at the right time. In Police training cognitions are developed through the right content of training e.g., Law, Forensic Science, Criminology, Investigation of crime etc. This cognitive component develops in our officers appreciation, feelings, and emotions to apply the right knowledge (Affective component). Ultimate result is the application of knowledge in day to day working (Conative component).

Two Situations arise-

Situation 1: Police Officer has the right knowledge and intention to apply but he does not apply i.e. there is dissonance in `Attitude' and `Behaviour'. Some Police Officers, having an excellent knowledge of Law and right intentions to apply Law, violate law.

Situation 2: Police officer has the right knowledge, intent which he applies. Situation 2 is preferred.

Functions of attitudes:

Katz (1960) has classified attitudes into four different groups based on their functions

Utilitarian: People adopt attitudes that are rewarding and that help them avoid punishment. In other words, any attitude that is adopted in a person's own self-interest is considered to serve a utilitarian function.

Ego Defensive: This function involves psychoanalytic principles where people use defense mechanisms to protect themselves from psychological harm. Defense mechanisms include:

- Denial
- Repression
- Projection
- Rationalization

We are more likely to use the ego-defensive function when we suffer frustration or misfortune.

Value-Expressive: serves to express one's central values and self-concept. Central values tend to establish our identity and gain us social approval thereby showing us who we are, and what we stand for.

Knowledge: People need to maintain an organized, meaningful, and stable view of the world. That being said important values and general principles can provide a framework for our knowledge. Attitudes achieve this goal by making things fit together and make sense.

Example:

- I believe that I am a good person.
- I believe that good things happen to good people.
- Something bad happens to Kishore.
- So I believe Bob must not be a good person.

Attitudes are imbibed in the individual, by 'direct experiences,' psychological factors, interactions with institutions they belong to, and social communication. Psychological processes involved in attitudinal formation include:

- Internalization
- Compliance
- Identification with the attitude.

3. Police and Desirable attitudes.

The author has classified the desirable attitude of Police officers as under.

3.1. Attitude to self.

3.1.1. Health (Physical, Mental, Social and Spiritual)

3.1.2. Self –esteem, Positive social concept and Self efficiency.

3.2. Attitude to the significant others

3.2.1. People being served from all the strata of society

3.2.2. Officers of Magistracy, Judiciary and Correctional administration

3.2.3. Senior officers, colleagues and subordinate ranks.

3.2.4. Outside experts

3.2.5. Media personnel

3.2.6. Elected representative of people

3.3. Attitude to Learning and change.

3.4. Attitude to 'Law,' 'Cultural heritage' and ultimately the Constitution of India.

- 3.5. Attitude to the `Scientific Aids to Investigation.
- 3.6. Attitude towards the observance of human rights.
- 3.7. Attitude towards the quality of service.
- B. Organization
- 3.8. Attitude to Police and Police organization
- 3.9. Attitude towards collaboration and networking with the organizations of excellence.

In the next section, training and non-training interventions are suggested for attitudinal change

4. Training and non-training interventions for the Attitudinal Development.

4.1 Attitude towards self (Self esteem, self efficacy and positive self concept).

Coopersmith (2003) defined `Self Esteem' as the degree to which people perceive themselves to be capable significant and worthy. Others scholars agree that self-esteem may form around any number of dimensions of self (eg. Physical, social, emotional, spiritual etc.). Second concept `Self-efficacy is defined as a belief that one can successfully execute future action or tasks to achieve some results. People who perceive themselves as highly capable, significant, successful, and worthy (high self-esteem) will predict higher probabilities of task success (high self-efficacy). Third concept of self

concept is defined as the individual's perceptions of behaviour, abilities and unique characteristics- a mental picture of who am I as a person?

Training Interventions to develop these dimensions of attitude to self may include:

- Theoretical inputs on self esteem, self-efficacy and self-concept (concept, dimensions and importance in life) to be given during training.
- Practical training on
 - Positive prestigious suggestions
 - Auto suggestions
 - Self-perceptions enhancement
 - Positive thinking
 - Rational Emotive Therapy and Cognitive restricting

(This may be done by a trained Clinical Psychologist)

- Psychological counseling of Police officers who have lower self esteem.
- Leadership training in
 - Expectancy theory
 - Art of giving feedback
 - Positive reinforcement techniques.
- Valuing the subordinates for their contributions.
- Nurturing leadership style is best suited for the development of positive self-concept and thus higher levels of self-esteem

4.2. Attitude towards Self-health management

W.H.O. has defined health as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." While discussing attitude toward health, as per the W.H. O. definition, these three components of health are taken into consideration namely physical, mental, and social.

In the physical domain, a healthy Police Officer maintains physiological homeostasis when confronted with physiological stress. It is praiseworthy that in the Police training enough stress is given on development and maintenance of 'physical health' of the trainees. Because of it the Police officers develop a very positive attitude towards their physical health. They continue to use Gymnasium and engage in the workouts throughout their lives

Mental health refers to cognitive, behavioural and emotional well being of the Police officers .It is all about how they think, feel and behave. Mental health affects their living, relationships and physical health. . For guaranteeing the adequate 'Mental Health', training in managing complexity, stress management , handling crisis situations and practising emotional resilience seem to be necessary. Techniques for managing stress and maintaining emotional resilience are to be emphasized. Besides providing the theoretical inputs, practical exercises are to be conducted in Police

training on stress management and emotional resilience. Environment at the workplace should be promoting better mental health amongst Police officers. Special counselling sessions by the trained psychologists should be arranged for the Police officers having lower mental health.

Through the above cited interventions, the Police officers will start loving their health.

4.3 Attitude towards the significant others

Consider the following stories:

"There was a man who made money selling balloons at a fair. He had all colors of balloons, including, red/yellow, blue and green. Whenever business was slow, he would release a helium-filled balloon into the air and when the children saw it go up, they all wanted to buy one. They would come up to him, buy a balloon and his sales would go up again. He continued this process all day. One day, he felt someone tugging at his jacket. He turned around and saw a little boy who asked., " If you released a black balloon, would that also fly?" Moved by the boy's concern, the man replied with empathy, "Son, it is not the colour of the balloon, it is what is inside that makes it go up."

"As a young Scots boy, Andrew Carnegie came to America and started doing odd jobs. He ended up as one of the largest steel manufacturers in the United States. At one time he had 43 millionaires working for him. Several decades ago, a

million dollars used to be a lot of money; even today it is a lot of money. Someone asked Mr. Carnegie who replied. "Dealing with people is like digging gold: Where you go digging for an ounce of gold. But when you go digging, you don't go looking for the dirt, you go looking for the gold."

These stories lead us to conclude that racial attitudes are not good for us. Secondly, 'Looking for gold in people' is a very right attitude for managing people.

I recall an incident when Field Marshall Manecshaw told a politician:

"Mr. Minister I am not allowed to think about him. He is my chief tomorrow, you will be asking my subordinate brigadiers and colonels, what they think of me. It's the surest way to run the discipline of the army, don't do it in future".

Can we develop a disciplined mind like him in our Police force - a right attitude? This attitude is developed if a Police leader has tremendous concern and love towards his own subordinates.

Media is the fourth pillar of democracy. A right attitude has to be developed in the Police officers towards them. Mere acceptance of them and their role in democracy will develop right attitudes.

'Perceiving politicians as the representatives of people' is an attitude which will ensure better interactions with them. A journey from misperceived perceptions to positive perceptions is

necessary. In democracy, Police cannot discard the representatives of people but their assertiveness should weave the fabric of the interactions with the politicians.

Appreciation of the reinforcing role of Judiciary, Magistracy and Correctional administration should be emphasized in training and interactions with the junior Police officer should be done.

Training in team building and inter personal competence is necessary for developing bonds of trust and acceptance of seniors, colleagues and subordinate ranks in This will help in developing positive attitude towards the above-cited agencies to facilitate better interaction for effective Police work. In training Courses Role Play Exercise highlighting the interactions of Police with the following should be conducted:

- Public.
- Downtrodden.
- Politicians.
- Journalists.
- Media.
- Judges.
- Lawyers.

It will help them to develop skills in effective interactions and empathy. In the training curriculum enough inputs should be there on the following aspects

- Human Rights Issues Scientific Aids to Investigation.
- Team Building.
- Role Clarity Exercises.

- Cooperation and Collaboration with other branches of Criminal Justice System.
- Interpersonal Relationships.
- Interrogation Techniques etc.

During training special visits should be arranged to the following.

- Courts.
- Forensic Medicine Departments.
- Forensic Science Labs.
- G.E.Q.P.
- Jails etc.

This will help in developing a positive attitude towards the above-cited agencies to facilitate better interaction for effective Police work.

4.4 Attitude to learning and change

Bob Garrat (1982) has hypothesized that the rate of learning in an organization should be equal or greater than changes in the external environment. i.e.: $I > C$. If it is not so, the Organization will be unable to avoid the future shock. It is generally found that when we grow in years, we develop the following negative attitudes to learning.

- I am too old to learn.
- Learning is restricted to schools and colleges only, because I get a degree/diploma certificate.
- Nobody is a potential source of learning for me.
- If I learn, I will be overburdened with work.

- If I share my willingness to learn, people will feel that I am a weak person.
- I learn from others not from myself.
- I do not gain anything from learning.
- Whatever I have learnt in past is sufficient for me to be effective till now.

There should be continuous supply of literature /training material to the Police personnel pertaining to the following:

- Recent enactments.
- Court decisions.
- Human Rights Issues.
- Case Studies of successful Police personnel.

In training Courses Role Play Exercise highlighting the interactions of Police with the following should be conducted:

- Public.
- Downtrodden.
- Politicians.
- Journalists.
- Media.
- Judges.
- Lawyers.

It will help them to develop skills in effective interactions and empathy. In the training curriculum enough methods should be there in the following:

- Human Rights Issues Scientific Aids to Investigation.
- Team Building.
- Role Clarity Exercises.

- Cooperation and Collaboration with other branches of Criminal Justice System.
- Interpersonal Relationships.
- Interrogation Techniques etc.

The knowledge base will provide an excellent positive frame work of mind. The Police personnel who excel in their duties, should be rewarded. Stringent punishment should be given to the Police personnel who do not abide by the law and violate Human Rights of people

4.5. Attitude towards the Constitution of India, Law, human rights and scientific aids to investigation

Knowledge has the power to develop a right attitude towards the Constitution of India, law etc. Attitude as communicated earlier, has 3 components- Knowledge (cognitions), Affective & Behavioral. Theatres, giving them Right knowledge through effective methodology is very important to develop the positive attitudes. I feel that-

- Experts should teach law and the constitution with proper explanations and implication for Police.
- Use of case-studies is recommended.
- Good practices/innovation in Innovation Technology and other domains of science and technology should be communicated without any delays. Training of Police officers to adopt these aspects should be

given continuously.

Right knowledge at right time will develop better appreciation of concepts and domains of knowledge there by transforming it into action:

- Right Knowledge
- Right Affect
- Right action

4.6 Attitude towards the quality of service

Let us consider the below-cited story-

A German once visited a temple under construction where he saw a sculptor making an idol of God. Suddenly he noticed a similar idol lying nearby, surprised, he asked the sculptor, "Do you need two statues of the same idol?"

"No," said the sculptor without looking up, "We need only one, but the first one got damaged at the last stage"

The gentleman examined the idol and found no apparent damage.

"Where is the damage?" he asked.

"There is a scratch on the nose of the idol." said the sculptor, still busy with his work.

"Where are you going to install the idol?"

The sculptor replied that it would be installed on a pillar twenty feet high.

"If the idol is that far, who is going to know that there is a scratch on the nose?" the gentleman asked.

The sculptor stopped work, looked up

at the gentleman, smiled and said, "I will know it..."

Excellence is not for someone else to notice, but for your own satisfaction and efficiency.

The question is:

Can we develop this habit of excellence (right attitude) in the Police officers to enable them to give quality service to the people?

Yes, this habit of mind can be developed if the Leaders emphasize this quality in their interactions with the subordinates. Total Quality Leadership (TQL) ensures the best possible service to the society. The essential element of Total Quality Leadership one-

- Customer focus (public)
- Alignment (Cooperation and collaboration within and outside the Police organization.
- Total involvement (Sincerely and dedication).
- Continuous improvement (of self and the force).
- Leadership Commitment

4.7. Attitude to Police and Police organization

The positive attitudes towards an organization reflect our love and devotion towards its-

- Vision

- Mission
- Targets
- Culture (norms/values/traditions)
- Infrastructure
- Environment (psychological and physical)

Following lost love negative attitudes are frequently expressed by the employees organization:

- Criticizing Organization in public places.
- Always find fault with the organization
- Taking job casually.
- Hiding capacity to perform.
- Setting low targets.
- Concealing information from others.
- Ganging up against someone
- Generating false report to please top management
- Preference for comforts and pomp & show.
- Never serious about safety.

The positive attitudes towards organizations may be developed by:

- Promoting participative culture.
- Conducting workshops for clarifying 'vision' mission and targets.
- Organizational culture diagnosis survey for remedial action.
- Continuous training of employees
- Interactive performance appraisal and counseling practices.
- Ensuring fairness in promotions and all employee's related matters.

4.8. Additional Points

Autobiographies and biographies of great leaders from various fields including Police should be recommended for self-study. Moreover, during teaching and other interactions these should be referred to frequently. Attitudes are formed also when we follow the role models, the stories from great epics (The Mahabharata, The Ramayan, The Holy Quran, The Guru Granth Saheb, The Holy Bible) are very important to weave the fabric of desirable attitudes of life. Recommended reading of motivational stories and tales serve the purpose also. Following examples are worth mentioning.

Story 1:

"In 1914, Thomas Edison at age 67, lost his factory, which was worth a few million dollars, to fire. It had very little insurance. No longer a young man Edison watched his lifetime effort go up in smoke and said "There is great value in disaster. All our mistakes are burnt up. Thank God we can start anew." In spite of disaster, three weeks later, he invented the phonograph. What an attitude!"

This story communicates an attitude towards failure i.e. rising above the disaster

Story 2:

"One day a partially deaf four-year old kid came home with a note in his pocket from his teacher, "Your Tommy is too stupid to

learn, get him out of the school." His mother read the note and answered, "My Tommy is not stupid to learn, I will teach him myself." And that Tommy grew up to be the great Thomas Edison. Thomas Edison had only three months of formal schooling, and he was partially deaf."

Attitude – Positive expectations result in great results,.

Story 3:

Abraham Lincoln's Consistency of effort to not lose life.

"Let me share someone's life history with you. This was a man who failed in business at the age of 21; was defeated in legislative race at 22. Failed again in business at age 24: overcame the death of his sweetheart a nervous breakdown at age 27, lost a congressional race at 34, lost a senatorial race at age 45, failed in an effort to become vice-president at age 47, lost a senatorial race at age 49 and was elected president of the United States at age 52."

Hope and optimism result in continuous efforts --- A great attitude in life.

In literature, we find numerous such stories, anecdotes and examples. Their use in training and workplace interactions is important for developing a positive attitude in Police officers.

5. Summing up

In this paper, an attempt is made to come-up with the training and non-training

interventions to develop desirable attitudes in Police. Attitude is covert whereas behavior is overt. Attitude has 3 components namely-cognitive, affective and behavioural. There are 4 functions attitudes play in life-Adjustive, Ego-defensive, Value expressive and knowledge functions. Attitude to self (Health, Self-esteem, self-efficacy and positive self-concept, attitude to significant others (People to be served from all stratas of Society, Magistracy, Judiciary, Correctional administrations, Media, elected representatives of people etc). Attitude to constitution, Law, and cultural heritage of an country; attitude to Police and Police organization. Attitude development takes place when knowledge related to all attitude objects is communicated very-effectively. Techniques for the development of Health (WHO definition- Physical, Mental and Social), Self-efficiency and self-esteem have been discussed to develop a very positive attitude to self. Negative attitudes, related discrimination, biases and prejudices and detrimental to Police attitude to learning, quality of service, excellence and organization (Police) have been discussed at length. Use of case-studies and storytelling has been recommended.

Effective TQL ensures a very positive attitude to quality service to the people. Leadership has to develop the culture of `Quality.

Bibliography

1. Allport, Gordon (1935), "Attitudes" in A Handbook of Social Psychology. Ed. C. Murchison, Wrester, M.A. Clark University Press, 789-844.
2. Covey, Stephen, R (2019), "The 7 Habits of highly effective people," Simon and Schuster, 12th edition.
3. Coopersmith (2003), "An excellent inquiry into the origins of self-esteem." Thrift books user.
4. Garrat Bob (2000), "The Learning Organization." Harper Collins Business.
5. Jung Carl (1921), "Psychological Types", Rascher Verlag, Zurich.
- 6.. Katz David (1960). "The functional approach to the study of attitudes." Public Opinion Quarterly, 24(2).
7. Khera Shiv (2014), "You Can Win": A Step by Step tool for Top Achievers." Bloomsbury India, 1st Edition.
- 8 Zig Ziglar and Tom Zigler (2016), "Find Your Success Code Born to Win" Prabhat Publications (Indian report).

Police Support for Victims of Crime in India: A Quest for Excellence



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Dr. Nazia Khan*

Abstract

The paper explores various dimensions of supporting victims in the criminal justice system in India. It specifically focuses on the role of Police in assisting the victims of crime, as the Police is the first law enforcing agency of the state approached by the victim. It further elaborates various legal and administrative aspects of assisting the victims and has documented Police practice in other countries as well for extending support to the victims of crime.

Keywords: Police, victims, law, victimology, crime, criminal justice system

Introduction

Victimology is the study related to crime victims. It looks into the whole criminal justice procedure from the victim's perspective. It has been observed that the victims have no rights, they merely emerge, when needed for the purpose of trial or investigation. They do not have the trial records nor are allowed to respond in the justice procedure. Hence, the concept of victimology emphasizes the victim's rights and further looks into ways of eliminating secondary victimization of victims.

A victim of crime not only suffers from the trauma of crime but from a series of traumatic experiences after the occurrence of crime. Victims are generally ignored in the entire process of the criminal justice system.

This leads to secondary victimization that emanates from various factors ranging from an indifferent Police attitude towards the trauma of the victims to the perpetrators being released because of botched up Police work. It is the state's responsibility to develop a victim-oriented approach in its whole gamut of criminal justice process so as to ensure that the rights of the victims are secured.

The UN Declaration on the needs of victims

Rights of victims are internationally recognized. The 1985 *United Nations Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power* signified an essential shift in the discourse around crime and victimization. There is a shift towards human rights perspective in the UN Declaration. It defines victims of crime and

Author's Intro:

* Assistant Professor, Department of Political Science, Jamia Millia Islamia (A Central University), New Delhi

victims of abuse of power. Victims of crime are those who individually or collectively suffered harm i.e., physical or mental injury, emotional suffering, economic loss or substantial impairment of their fundamental rights. The following rights of victims of crime are recognized in the UN Declaration:

- Access to justice and fair treatment
- Contact with the criminal justice system (to be recognized as a legitimate participant in the process)
- Safety (both within the criminal justice system, and a restored sense of overall safety)
- Information (the most commonly expressed need for victims)
- Assistance and services
- Continuity (in systems and across organizations and departments)
- To have a voice (to be heard, especially regarding what they have suffered)
- Validation and acknowledgement (that their feelings are normal)
- Restitution, redress and apology. The right to be treated with fairness and respect for dignity and privacy
- The right to offer information
- The right to receive information
- The right to protection
- The right to assistance
- The right to compensation
- The right to restitution.

Impact of Crime on Victims

Crime affects not only the victim but their families as well. The impact of crime ranges from financial loss to psychological injury, apart from direct physical loss or injury.

Crime leaves multiple impacts on the victim's body and mind. The victim feels unsafe, desolated and also stigmatized. State takes full responsibility for investigating the crime and punishing the offender. However, victims have no rights in the criminal justice system. Victims are used as mere witnesses to support the investigation. Although, many national-level commissions and committees have strongly advocated the victim's rights and emphasized the need for a victim's law.

The victim sets the criminal justice system in motion by first rendering the information to the Police. The victim, as an informant, is entitled to a copy of the FIR, free of cost. However, the needs of vulnerable sections of society, i.e., women and children, have not been given adequate attention in the criminal justice system. Police are the first and foremost agency of the state to meet the victims of crime. Role of the Police is likewise very crucial and vital to assisting the victims, instead of just treating them as mere informants. There is also no statutory scheme recognizing the rehabilitative needs of the victims of rape or domestic violence or even trafficking per se. In *Delhi Domestic Working Women's Forum v. Union of India* (1995 SCC (1) 14, JT 1994 (7) 183), six women working as domestic servants in Delhi, were raped by eight army personnel on a moving train between Ranchi and Delhi. It has been pointed by the Court in the case that *complaints are handled roughly and are not given much attention as is warranted. The victims have invariably found rape trials a traumatic experience.*

Concept of Victimization

Victims are the most important component in the criminal justice system. Police note the crimes only because of the victim's cooperation and reporting. The extent to which victims report crime shows their trust in the Police and justice system. They play a crucial role in the entire process of an investigation. The concept of victim's rights and victimology as the field emerged mostly after the Second World War. Hans Von Hentig introduced the first study of crime victims in his book *The Criminal and its Victim* (1948). Von Hentig wanted to study victims to understand the crime and the criminal. In his book, Von Hentig draws the relationship between crime and criminology with the support of homicide data from the United States and Germany.

Another key personality in the field of victimology is Benjamin Mendelsohn. He was the first person to introduce the term 'victimology' (Mendelsohn 1976). He was interested in defining the victim-offender relationship and called it *penal couple* (Mendelsohn 1976). He stood in favor of science of victimology in studying victims and victimization, just as criminology studies crime and criminal.

An overview of this field reflects three approaches (Bienkowska, 1992; Kirchhoff, 1994). The first is penal victimology which is considered as part of criminology and is focused on victims of crimes. The second approach is general victimology. It includes victims of accidents and natural disaster. This

approach was developed by scholars like John Dussich (2003) and Sam Garkawe (2004). The third approach is the human rights approach, developed by authors like Robert Elias (1985). This approach includes all kinds of human-made victimizations like genocide, torture, slavery and so on.

However, victimization is of two kinds, primary victimization and secondary victimization. Primary victimization is the one which happens after some crime, man-made disaster or natural disaster. Secondary victimization is the process which the victim goes through after primary victimization, like loss of confidence, feeling of insult and trauma, tackling with criminal justice system to get justice, dealing with the unresponsive behavior of the Police in many places, and feeling lost in the criminal justice process.

Victim Assistance and Role of the Police

Most of the times, victims are unfamiliar with the criminal justice system. Contacting the Police is the first step in the legal process taken by the victim. As the first point of contact, Police have a very crucial role in setting a positive tone for the entire criminal justice system. Most of the time victims show their dissatisfaction with Police as they want the Police to tell them about the services to help them deal with the impact of crime and give them advice on the practical assistance (Gardner; 1989). Internationally one in ten victims of serious crimes who reported to the Police received specialized help and expressed a need for support. Victim support agencies provided services to approximately

one in five victims with expressed needs (International Crime Victim Survey 2005). Many studies have also revealed that victims of sexual assault, domestic violence, hate crimes and victims of marginalized social groups often feel that the Police are not sympathetic to them (VCCAV1994; UN in press). Often the victim relies on the Police as immediate “crisis intervener”. However, this purpose of crisis intervention by the Police is a temporary phase in the life of the individual, group or family in distress. Still, if appropriately done it is considered to be very crucial in building the trust of the victim in the criminal justice system. A victim who feels vulnerable looks at the Police officer for advice on dealing with the immediate effects of a crime, subject to officer’s verbal and non-verbal responses. Police as crisis interveners not only assist by looking into the safety and security needs of the victims but also help them to a large extent in locating and mobilizing their support resources, i.e., family, friends etc. Further, Police can also help victims by giving them practical advice on crime prevention, repair of damages and legal rights.

Many good examples can be taken from countries like Australia, in late 1980s. Australian Commissioners of Police encouraged officers to be communicative in their concern towards victims. They further suggested that in their first dealing with the victim of a crime, they should use words which sound sympathetic like “*I am sorry this happened to you*”, “*You are safe now*”. The commissioner also agreed that Police should also attend to the emotional needs of the victim. Further, *the International*

Association of Chiefs of Police tackled the Police-victim relationship at a summit in the late 1990’s. They determined that in order to protect the rights and needs of victims, Police should provide them with:

- **Safety:** Protection from perpetrators and re-victimization; a collaborative problem-solving approach; and a restored sense of community and individual safety.
- **Access:** Regardless of family circumstances, the victim should be able to access the criminal justice system and obtain information and services.
- **Information:** the victim should be informed of the justice system processes.
- **Support:** to ensure that the victim is able to get adequate services and assistance to participate in the justice process. Also, the victim should get support for coming out of the trauma caused by crime.
- **Continuity:** there should be continuity of support throughout the justice process and also at all the stages.
- **Voice:** Victims should be empowered to speak out about processing of individual cases; opportunities to influence agency and system-wide policies and practices. (International Association of Chiefs of Police 1999)

Police play a very crucial role in the entire process of the justice system. They help in victim restoration as well as alleviating their fears. Effective and efficient Police services help the victim to rebuild confidence and to participate in the justice system. The victim

has a right to be informed to some extent about the progress of the investigation, as he/she is always curious to know to what extent the Police are involved in the investigation. South Australia Police Commissioner, David Hunt reiterated that there is a need to rethink past Police strategies. Also, he emphasized the process of preventing victimization because he believed that the Police are in a unique position to observe the trauma and suffering of victims of crime (Hunt; 1987). He also, for that matter, strongly supported community policing.

Police of Indonesia at the time of transition from paramilitary organization to a more humanist style of Police committed themselves to the following:

- Quality service to people of Indonesia
- Anti-Corruption and Anti Violence
- Building the character of the Police as guardians and servants of the public
- Excellent service to maintain security
- Excellent service in order to maintain and protect citizens (O'Connell 2010).

Good practice means inculcating victim-oriented approach in policing. Muir (1986) identifies four of them, which are as follows:

Crisis Intervention- that means immediate intervention in crisis situations, with a focus on victims of violence, especially interpersonal and family disputes. Timely response in addition to assessment, referral and counseling.

• Information/Referral- This approach includes

information and referral. Information may cover the progress of the investigation, prosecution and court outcome. It may also involve ways to identify victims-clients for a referral to a broad range of services. Police and non-Police usually provide service only during business hours.

- **Comprehensive-** combines both approaches.
- **Generalist-** aims to up-skill Police officers and other staff through training on victims needs etc. to improve quality of service offered to all crime victims. The intention is to change the behavior of Police staff.

In addition to procedural reforms, Police are progressively collaborating with other government agencies, health and welfare professionals and victim assistance providers to deliver a holistic set of responses to victims of crime. This is particularly done in cases of gender violence, child abuse, and victims with disabilities. These partnerships are relevant in providing a wholesome response to different types of victimization.

Law and Victim Assistance in India

In *Bodhisattwa Gautam vs Subhra Chakraborty* (AIR 1996 SC 922), the Supreme Court held that if the court trying an offence of rape has jurisdiction to award compensation at the final stage, the court also has the right to award interim compensation. The court, having been satisfied with the prima facie culpability of the accused, ordered him to pay a sum of Rs.1000 every month to the victim as interim compensation along with arrears of compensation from the date of the

complaint. It is a milestone case in which the Supreme Court issued a set of guidelines to help indigenous rape victims who cannot afford legal, medical and psychological services, in accordance with the **Principles of UN Declaration of Justice for Victims of Crime and Abuse of Power, 1985:**

1. The complainant in sexual assault cases have to be provided with legal representation. It is essential to have someone well acquainted with the criminal justice system. The role of the victim's advocate would not only be to explain the nature of the proceedings, to prepare her for the case and to assist her in the Police station and in court but also to provide her with guidance as to how she might obtain help of different nature from other agencies, for example mind counseling or medical assistance. It is important to secure continuity of support by ensuring that the same person who looked after the complainant's interest in the Police station represented her till the end of the case.
2. Legal assistance would be provided at the Police stations since the victim of sexual assault might very well be in a distressed state upon arrival at the Police station. The guidance and support of a lawyer at this stage and whilst she was being questioned would be of great assistance to her.
3. Police are under a duty to inform the victim of her right to representation before any questions are asked of her, and the Police report should state that the victim was so informed.
4. A list of advocates willing to act in these cases should be kept at Police stations for victims who did not have a particular lawyer in mind or whose own lawyer was unavailable.
5. An advocate would be appointed by the court, upon application by the Police at the earliest convenient moment, but in order to ensure that victims were questioned without undue delay, advocates would be authorized to act at the Police station before leave of the court was sought or obtained.
6. In rape trials, the secrecy of the victim must be maintained in order to avoid any mental trauma.
7. With regard to the Directive Principles contained under Art. 38 (1) of the Constitution of India, it is necessary to set up a Criminal Injuries Compensation Board. Keeping in mind sensitive crimes like rape, where the rape victims feel victimized at various levels, like a possible substantial financial loss. Some, for example, are too traumatized to continue in employment and also feel stigmatized.
8. Compensation for victims shall be awarded by the Court on conviction of the offender and by the Criminal Injuries Compensation Board whether or not a conviction has taken place. The Board will take into account pain, suffering and shock as well as the loss of earnings due to pregnancy and the expenses of childbirth if this occurred as a result of the rape.

Role of Judiciary in Victim Compensation

- **State led Compensation for Victims of Abuse of Power**

The Supreme Court recognized the need for state compensation to victims of abuse of power by the State machinery. In the landmark case of *Rudul Sah vs State of Bihar* (AIR 1983 SC 1086), the Supreme Court ordered the Government of Bihar to pay Rudul Sah a further sum of Rs.30,000 as compensation, which according to the court was of a “palliative nature”, in addition to a sum of Rs.5,000, in a case of illegal incarceration of the victim for long years. Similarly, in *Saheli, a Women's Resources Centre through Mrs. Nalini Bhanot vs Commissioner of Police, Delhi Police* (AIR 1990 SC 513), a sum of Rs. 75000 was awarded by the Court to the victim's mother as state compensation, and the Court reiterated that the victim died due to beating by the Police.

The constitutional right of a victim of custodial crime to receive compensation was also recognized by the Supreme Court in *Nilabati Behera vs State of Orissa* (AIR 1997 SCC 416). The Court reiterated that it is not enough for the victim of custodial violence to relegate him/her to the remedy of the ordinary civil suit. The Court thus recognized right to get relief of compensation in public law from courts exercising their writ jurisdiction. This was further developed in the landmark case of ***D. K. Basu vs State of West Bengal* (AIR 1997 SC 610)**. The Supreme Court held that state compensation is mandatory in

cases of abuse of power and said that “To repair the wrong done and give judicial redress for legal injury is a compulsion of judicial conscience”. Also, it was explained by the Supreme Court that *“the award of compensation in public law jurisdiction is also without prejudice for any other action like civil suit for damages which is lawfully available to the victim or heirs of the deceased victim with respect to the same matter of the tortuous act committed by the functionaries of the state....the relief to redress the wrong for the established invasion of the fundamental rights of the citizen, under the public law jurisdiction, thus in addition to traditional remedies, and not in degradation of them.”*

- **Victim Compensation for the Victims of Crime**

The landmark judgment came from **Delhi High Court in *Karan vs State NCT of Delhi* (CRL.A. 352/2020)** on 27th November 2020, in this case the court made judicious use of Section 357 CrPc to compensate the victim of crime. The court used Victim Impact Report (VIR) as the basis to determine the quantum of compensation. The court made striking difference between Victim Impact Report (VIR) and Victim Impact Statement (VIS). The VIS is the instrument of victim participation that informs the court in victim's words as to how the crime has impacted them. It broadly constitutes physical injury, emotional harm or the damage or loss of property because of the offence.

However, Delhi High Court conception of VIR is different from VIS. According to the court, purpose of VIR is to act as an aid to determine the quantum of compensation to the victim in conjunction with paying capacity of the accused. The VIR unlike VIS will not be directly made by the victim but by the Delhi Legal Service Authority to ascertain the impact of crime upon the victim after the conviction. The court will order compensation based on this report and in the manner laid down by the judgment. The scheme is binding on all the lower courts in Delhi that deal with criminal cases.

Although, the Section 357 CrPc empowered the courts to order the accused to pay compensation to the victims, nonetheless this section was not frequently used by the lower courts. However, earlier the lower courts found some practical constraints while applying Section 357 CrPc. Firstly, the language of the Section 357 CrPc is such that it allows issuing orders for only such compensations as may otherwise be recoverable in the civil courts. Secondly, absence of a uniform head under which compensation was granted. Thirdly, there was no uniform criterion to calculate the paying capacity of the accused and the impact of crime on victim. All these impediments erstwhile the Delhi High Court judgment prevented the lower courts from using Section 357 CrPc for victim compensation. Therefore, the Delhi High Court judgment came as a boon and some relief for victims of crime in getting victim compensation.

At present, there is no separate law for victims

of crime in India, though many national committees and commissions have reiterated the need to have a separate law for victims. Several recommendations of committees and commissions on justice to victims in India are as follows:

The Law Commission of India

The Law Commission in India stated that "The State should accept the principle of providing assistance to victims out of its own funds, (i) in cases of acquittals; or (ii) where the offender is not traceable, but the victim is identified; and (iii) also in cases where the offence is proved." The 152nd Law Commission Report (1994) on Custodial Crimes, had recommended the introduction of section-357A, prescribing inter-alia that the compensation be awarded at the time of sentencing to the victims of crime- Rs. 25000/- in case of bodily injury, not resulting in death and Rs. 1,00,000 in case of death. In the 154th Report (1996) of the Law Commission of India on CrPC noticed that its earlier recommendations have still not been given effect by the government. It went one step further and recommended that it was necessary to incorporate a new section-357-A in the Code to provide for a comprehensive scheme of payment of compensation for all victims fairly and adequately by the courts. Heads of compensation are for injuries, for any loss or damage to the property of claimant which occurred in the course of his/her sustaining the injuries and in case of death from injuries resulting in loss of support to dependents.

The Justice Malimath Committee on Reforms of Criminal Justice System in India

Justice Malimath Committee made recommendations to improve the position of victims in the criminal justice system. Some of the important recommendations include:

- If the victim is dead, his or her legal representatives have the right to implead as the party in every criminal proceeding where the offence is punishable with seven years of imprisonment or more.
- In select cases, with the permission of the court, an approved voluntary organization shall have the right to implead in court proceedings.
- The victim has the right to be represented by an advocate and the same shall be provided at the cost of the state if the victim cannot afford a lawyer.
- Victims have the right to participate in criminal trials.
- Legal services to victims may be extended to include psychiatric and medical help, interim compensation and protection against secondary victimization.
- Victim compensation is a state obligation in all serious crimes.

Despite these recommendations by various national committees and commissions, the situation of victims in India remains grim. The very first step by the victim for accessing justice is a Police station. It is very pertinent to have a victim-friendly Police station. Behaviour of the Police while assisting the victims plays a very significant role at this threshold of criminal justice system.

Police and Victim Support: A study of Japan

A well-documented practice in Japan to assist victims in the Police station may be helpful in having a better understanding of victim's support by the Police. The author has done a field study of the practice in order to document the victim support system in Japan. The author also visited a few Police stations in Japan and interviewed some Police personnel. This field study is mostly the outcome based on interviews, scanings of official documents and surveys in the Mito city of Japan.

Police in Japan have adopted measures to support the victims of crime. This practice has reduced the gap to a large extent between the public and the Police. The helping attitude of the Police towards the victims has further encouraged the people to approach the Police at the time of trouble or for seeking help. Crime victims (including the bereaved families of the victims) not only undergo loss of life, physical injury, loss of property, other direct losses and damage but also suffer from what is known as indirect victimization like emotional shock, physical disorder arising from being the victim of crime and economic loss stemming from the medical expenses, loss of employment etc.

Key Issues Addressed

Police in Japan help the crime victims after receiving the complaint and arrest the suspects. They also help them with recovery by minimizing the damage caused and preventing the reappearance of crime. In February 1996, the National Police Agency

issued its necessary policies delineating the measures for supporting the crime victims. In May of the same year, the National Police Agency also established an office for crime victims in the Allowance and Welfare Division of its Director-General Secretariat. In pursuance of the Crime Victim Benefit Payment law, the National Public Safety Commission specified "the Basic Policy regarding the implementation of the support for victims of crime and others by the chief of the Police Headquarters" which came into effect in 2002. In 2005, as per the National Government decision on the Basic Plan for the Crime Victims, three investigative committees were set up namely, Investigative Committee on the financial support, Investigative Committee on Liaison and Support and Investigative Committee on support for private groups.

Police have taken specific initiatives for the support of the crime victims. Each prefecture's Police have prepared a pamphlet referred to as the brochure for crime victims of murder, assault, rape or their bereaved family members. Officers distribute these pamphlets and also explain their content, if necessary, when they interview victims or when the crime has been reported.

Strategy Applied

Police officers assigned to Police boxes or the local Police officers contact victims living in the areas for which they are responsible. These Police officers provide the victims information helpful for recovery or prevention of further injury, provide information on crime prevention, listen to the victim's expectations

regarding the Police and also respond to the victim's request for advice.

A Counseling centre has been created within most Police headquarters to respond to the citizen's request for assistance. Also, telephonic counseling facility has been created and can be reached from anywhere in the country by dialing 9110. People who call on this number reach on the Comprehensive Counseling Centre, and additional facilities specializing in counseling for victims of sex crimes and for juveniles have been set up.

There are occasions when crime victims are emotionally injured and require psychological counseling. Hence to overcome emotional injury, the Police department has also organized counseling systems in which they dispatch officers with expertise in counseling and also work together with psychiatrists and psychologists.

Apart from providing services to the victims of various crimes, Police work in cooperation with other institutions and organizations which are as follows:

Crime Victim Relief Foundation: It was established in May 1981; the foundation funds the scholarships to the children who lost their parents to a crime. The foundation also cooperates in various ways with life counseling and private victim support groups.

National Network for Victim Support: This was created in 1998 and is working to strengthen ties with victim support groups, train the staff of private victim support groups and also supports the victim self-help

groups. There are also 'Private Victim Support Groups' which focus on the needs of the crime victims by providing counseling for them to recover from their emotional injuries. These have been established in the various regions recently.

Early-Assistance-Providing Groups for Crime Victims: Each prefectural Public Safety Commission has been charged with the task of designating non-profit organizations known as 'Early-Assistance-Providing Groups for Crime Victims' which have contributed to the swift reduction in damage to the victims and providing continuous support until they regain some peace and stability in their lives. This includes awareness-raising activity, telephonic and face to face counseling, accompanying the victim to the hospital or the court and also providing volunteer counselors.

The network of Police and Related Institutions and Organizations

Victims need support and assistance in medical and court-related matters. Since the Police are unable to meet all these needs by themselves hence the coordination with legal, government and medical institutions is required. Based on this idea Liaison Council for Victim Assistance, composed of the Police, governor's office, and other related institution and groups have been organized in each prefecture across the nation.

Police Support for Crime Victims

The victim often suffers not only physical loss but undergoes social and psychological suffering as well. Whenever a crime occurs, Police in Japan assist victims financially and socially, as per the need of the victim. Some Police officers are designated as 'Victim Assistant Officers' so that they can be available any time for the victim assistance service. Also, the Police work in close cooperation with the municipal and other private organizations for their recovery.

According to one victim assistant officer in Ibaraki Prefecture *"so to meet the various needs of the victim, cooperation of various other organizations is extremely important"*.

Police also distribute leaflets to the crime victims for victim assistance information. These leaflets contain information on criminal procedures and also the assistance services provided to the victim. The information is there in eight different languages, including Chinese, English and Korean.

Apart from this, there are certain other support systems provided for the crime victims. The government provides monetary compensation for the surviving families of the crime victims. At the Police stations, consultation services are provided. Consultation services deal with crimes like domestic violence, murder and rape.

Practice Outcome

Police in Japan have established a system to contact the victims. Under this system, the investigating officer contacts victims and their bereaved families and provides them

with the information regarding criminal procedures, crime victim support, progress of the investigation, the arrest and processing of the suspect. Police officers assigned to the Police boxes pay visits to the victim in the areas for which they are responsible.

There are counseling centres within most of the Police headquarters so as to respond to the citizen's request for assistance. Telephonic counseling facilities have also been provided to the victims through which a victim can contact the counseling centres from any part of the country. Hence the victim can contact the centres by dialling 9110 from anywhere at any time. Apart from it, there are special facilities for counseling the victims of sex crimes, for juveniles and other sensitive crimes.

According to one of the residents of Ibaraki Prefecture in Japan, *"Police in Japan are quite helpful and also concerned about the needs and requirements of the victims of crime. They also distribute the brochures in the Prefecture containing the services available for the crime victims."*

For providing better counseling facilities, Police work together with psychiatrists and psychologists. Even during the investigation, Police take care of the psychological needs of the victim so to avoid any secondary victimization. When officers are called to the victim's home in an emergency like sexual assault, they use unmarked cars and dress in street clothes if the victim does not wish to reveal the fact that he/she has contacted the Police. Whenever the victim feels reluctant to come to the Police station or the Police boxes,

then the Police use the victim response vehicles so as to make it possible for them to meet the Police at the place of his/her choice and maintaining his/her privacy while performing necessary interviews and on-site inspection of crime scenes.

All this, as mentioned earlier, is not possible alone by the Police; hence it needs the cooperation of various other non-governmental organizations. Police, therefore, are working in close association with many victim assistance centres. One such victim assistance services providing organizations designated by the Ibaraki Prefecture Public Safety Commission is "Ibaraki Victim Assistance Centre" which work in close association with the Police. The centre provides the *Victim Advocates and Victim Counselors*. These advocates and counselors are appointed on the basis of their experience in the victim assistance field. These *Victim Advocates and Victim Counselors* provide telephonic as well as face to face counseling and other direct services on the request of the victim's needs. These services might include accompanying the victim to the court, securing a court gallery seat, explaining legal proceedings to the victim and also if required arranging a press conference for them. Other services provided by them include assisting the victim when applying for crime victim benefit. And all this is possible by the close cooperation of the Police; hence Police work in cooperation with these organizations in assisting the victim and provide necessary support. Victims first approach the Police, and are then referred by them to victim assistance organizations. This

also has helped to reduce the gap between the public and the Police. All these services, in a way have made the Police more reliable in the eyes of the public.

This practice has increased the cooperation between the Police and other victim assistance organizations. People have increasingly become reliable on the Police and Police also have taken the responsibility for assisting the people in need and during their sufferings. Further, this practice could be replicated in other parts of the world as well. This would help in reducing the gap between the Police and the people and would also make the Police sensitive to the needs and demands of the victims of a crime.

Other best practices of the Police to assist victims in some other countries

South Australia

After the first UN Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power (1985), the South Australian Police Commissioner committed the Police to providing a consistent approach for addressing the needs of victims of crime. Also, at the same time developing strategies to reduce actual victimization and risk of victimization. The Commissioner instructed that the Police should honour victim's rights. The instructions also take into account the victim's complaint about an officer's attitude or behavior. Also, the Commissioner emphasized that the Police should treat all crime victims with respect and dignity and keeping victims, whosoever request, informed about the progress of the investigation. Further, the sessions on victim

rights and victim assistance be integrated into the recruitment training course and in-service training. It should be supported by the introduction of victimology as a core policing elective in Diploma and Post graduate Diploma and Business Management (Justice Administration). Currently, as other commissioners have followed this initiative, all Police personnel seeking promotion to sergeant or above in rank must hold an Advanced Diploma in Policing, which incorporates 'Victimology' as a compulsory subject. Since the late 1980s, it has been a South Australian Police policy and practice that whenever a victim reports an offence, they should be given a booklet listing victim's rights and outlining criminal justice process. The Commissioner also established Victims of Crime Branch, now known as 'Victim Strategy Section'. All this is considered as an essential move towards reorienting Police services to the victim's needs.

Korea

The Korean Police Agency also has gone the extra mile to establish a relation between the Police and the victims. For that matter, it operates a system called "*Pihaeja Deachekgya*" within the Criminal Investigation Bureau. The section assists the victims of crime who are in touch with the Police. Furthermore, the Korean Police established a program called "Victim Supporters". The program helps to facilitate communication between the Police and the victims. The Victim Supporters assist victims in the criminal justice procedure, keep them informed and also advise them on their safety concerns. The agency well realized

that a victim of crime also goes through psychological trauma, hence keeping in mind the need of the victim, the Police agency employed “special agents” in 2006 that are tasked to provide victims with crisis intervention and psychological “First-aid”. The eligibility of each special agent is to have at least a bachelor’s degree in psychology and also to have some practical experience in psychological counseling. (Kim. 2012)

Lessons for India from the practices in Japan, South Australia and Korea

The practices documented above have proved to be good practices in narrowing down the gap between Police and the victims of crime. They have further built up the trust of victims in the Police organization. This to a large extent helped in bringing down secondary victimization. Hence, certain lessons could be learnt from these Police practices. Some of them are listed below:

1. Creating counseling centres:

A counseling centre could be created within Police stations so as to respond to citizen’s request for assistance. Further, telephonic counseling facility could be provided to the victims of crime. Also, special counseling facility could be provided to the victims of sex crime, juveniles etc.

2. Collaborating with non-profit/non-governmental organizations working for victim’s support.

3. Replicating South Australia Model, the Police in India should take into account victim’s complaints about Police attitude

and behavior. This would be helpful in treating victims with dignity and respect.

4. Sessions on victim’s rights and victim assistance should be incorporated into Police recruitment and training programs as well as the in-service training programs.
5. Whenever victims report an offence, they should be given a booklet listing victim’s rights in the criminal justice process.
6. The practice adopted by Korean Police could be replicated in India so as to enhance the support system for the victims of crime. A special section of officers could be assigned as “Victim Supporters” to assist victims, inform them about the services available and also victims can consult them on their safety concerns.

These practices if incorporated could be helpful and would provide an impression in bridging the yawning gap between the Police and victims of crime. It would help in enabling the victims to develop trust in the Police organization. It would also enable them to have a voice in the entire gamut of criminal justice system.

Conclusion: Victim, Police & Victimology

The primary aim of penal victimology is to attain equal justice for the victim and the offender. That does not in any way means abrogating the basic rights of the accused as it does not ameliorate the victim’s condition in the criminal justice system.

Police, when adequately staffed, trained and funded can provide critical assistance

and information to victims as they begin to progress through 'the daunting criminal justice system'. Good practice in policing means that the Police should serve as a link between victim and the criminal justice system, working in close cooperation with victims of crime. In other words, victim should be treated as an end in itself rather than a means to an end. Furthermore, Police should work in close contact with other government agencies and victim support organization so as to provide a comprehensive response to victim's needs.

Also, legal and administrative instruments both national and international i.e., Declarations on victim's rights, protocols or guidelines should be compiled together as a handbook for Police as a guidance to govern Police treatment of victims. Victimology should become a part of curriculum in Police training. There should be appropriate mechanisms to scrutinize Police performance and to open up avenues for victims for grievance redressal and feedback. Victims should be provided with all information about the services available to help them in dealing with the brunt of crime. This will increase the reliability of victims on the Police and would further narrow down the gap between the Police and the victims of crime.

References

- Curtis, M & Pankhurst, G. (2002) New South Wales: Phone in Survey of Victims of Crime, *Journal of Australian Society of Victimology*, 2, pp: 10-20
- Bienkowska, E. (1992). What is Victimology? Some Reflections on the Concept of Victimology. In: S. Ben-David & G.F. Kirchhoff (ed.) *International Faces of Victimology* (pp. 81-88). Monchengladbach: World Society of Victimology Publishing.
- Clifford, W. 1982, *Policing a Democracy*, Australian Crime Prevention Council Quarterly Journal, 5(4), Sept-Oct. pp 1-9
- Commonwealth Secretariat (2003) *Best Practice-Commonwealth guidelines for the treatment of victims of crime*, London GB: Commonwealth Secretariat
- Dussich, J. (2003) *Police & Victims*, Paper presented to Victimology and Victim Assistance Course, Stellenbosch, South Africa; World Society of Victimology
- Elias, R. (1985) *Transcending Our Social Reality of Victimization: Towards a New Victimology of Human Rights*, *Victimology*, 1985, Vol 10, pp:6-25
- Gardner, J. (1989) *Victims' Satisfaction with Criminal Justice System; A paper presented at the fifth Annual Conference of the Australian and New Zealand Society of Criminology*, July.
- Garkawe, S. (2004). *Revisiting the Scope of Victimology-How Broad a Discipline Should it Be?* *International Review of Victimology*, 11, pp:275-294.
- Hagemann, O, Sahafer, P and Schmidt, S.(eds). (2009). *Victimology, Victim Assistance and Criminal Justice*, WAZ-Druck.

- Hentig, Von. (1948) *The Criminal and His Victim: Studies in Sociobiology of Crime*, New Haven, Yale University Press.
- Hunt, D. (1987) *Victims of Crime: Towards a preventive approach*, NPRU Review, 3(1), pp. 5-18.
- Ibaraki Prefecture Police (2009) *Ibaraki Prefecture Police Pamphlet*, Japan, Pamphlet (English Translation)
- International Association of Chiefs of Police (1999) *What do victim want?* Online: Justice Strategy Unit (1999) *Review on Victims of Crime-Report One*, Attorney-General's Department, Justice Strategy Unit, South Australia, Adelaide, <www.voc.sa.gov.au>
- Justice Strategy Unit (2000) *Review on Victims of Crime-Report Two (Victims Survey)*, Attorney General's Department, Justice Strategy Unit, South Australia, Adelaide, <www.voc.sa.gov.au>
- Kim, J.M. (2012) *The changes of Korean victim policy in the last decade*. In H, Morosawa, J, Dussich & G. F. Kirchhoff (eds), (2009) *Victimology and Human Security: New Horizons*, Netherlands, Wolf Legal.
- Kirchhoff, G.F. (1994). *Victimology – History and Basic Concepts*. Dans: G.F. Kirchhoff, E. Kosovski et H.J. Schneider (eds.). *International Debates of Victimology* (pp.1-81). Mönchengladbach: WSV Publishing.
- Mendelson (1976) *Victimology and Contemporary Society's Trends*, *Victimology*, Vol I, pp:08-28.
- Muir, J. (1986) *A handbook on planning and managing Police-based victim assistance programs*, Technical Report, Solicitor General, Canada.
- National Crime Record Bureau (2000) *Crime in India*. www.ncrb.nic.in
- National Human Rights Commission *Annual Reports*, New Delhi, India.
- Neuman, E. (1994) *Victimisation by Police in Latin America*, In Kirchhoff, Kosovski & Scheider(eds) *International debates of Victimology*, WSV publishing: Mönchengladbach, pp. 329-346.
- O'Connell, M. (2010) *Police Responses to Victim of Crime*. Paper presented at the Asia post-graduate course on *Victimology and Victim Assistance*, hosted by Tokiwa University's International Victimology Institute and Faculty of Law, University of Indonesia.
- UNODC (1999) *Handbook on Justice of Victims*, UNODC, Centre for International Crime Prevention.
- Wilson, C. (1991) *Police as Victims of Crime*, *Journal of Australasian Society of Victimology*, Special Edition, April, pp. 61-62.

Scourge of Cyber Fraud during Covid-19: Challenges and Resolutions



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Dr. Nidhi Saxena¹
Dr. Veer Mayank²

Abstract

This increased use of the internet, has made life easier but on the other hand has simultaneously led to an increased threat of online crimes in particular cyber fraud. The paper analyzes the existing applicable Indian laws on cyber fraud cases while focusing on the numerous challenges that regulatory structures of the State are facing today. It also refers to efforts of the global body with regional efforts introduced to equip the region with advanced information technology and measures taken to control cyber security issues, fraudulent etc. activities on the internet. The research paper is based on two propositions: one, the specific roles and responsibilities of individuals; banking institutions. The Police and the government have to be reassessed and redefined. The roles of these individuals and organisations have evolved over a period of time and are generally well defined in the context of the existing societal norms and practices. However, they need to be redefined and contextualised in the emerging norms of an interconnected and cyber capable society. The second is the rules and procedures of cyber law enforcement have to be defined and polished because cybercriminals could range from an individual who is a child or novice to a well-accomplished software expert. Similarly a cybercriminal could be anyone who doesn't understand the intricacies of the cyber domain to someone who creates such a cyber domain. This paper looks at the laws to regulate cyber crimes and attempts to offer suggestions for modifying these laws for addressing the emerging challenges.

Keywords : Cyber Fraud, Cyber Scam, Phishing, Cyber Fraudster, Financial Transactions.

Section I - Introduction

Information and communication technologies are extremely transformative in nature. When an activity is conducted, it is not done independently of the medium through which the activity is conducted

or independently of the people who are conducting that activity. The medium through which the activity is conducted along with the individuals who conduct the activity, influences the activity. In the offence of cyber fraud, the act of stealing information and thereby money is conducted in the virtual

Author's Intro:

- 1 Assistant Professor, Department of Law, Sikkim University (A Central University), Gangtok, Sikkim, India.
- 2 Assistant Professor, Department of Law, Sikkim University (A Central University), Gangtok, Sikkim, India.

world or cyberspace, thus both influence the offence, the medium itself cannot lead to the offence, similarly, fraudsters do not independently create the offence of cyber fraud. The internet or cyberspace is a free space unrestricted in terms of users; uncontrolled in terms of activities; unseen in terms of geographical borders and unbelievable in terms of potential and thus provides huge opportunities for the commission of online crime or cybercrime. Cyber crime evolved from a minor nuisance to major crimes¹ and thus changed cyberspace into a criminal territory for miscreants to perform any illegal activities which were difficult heretofore to be performed physically.

Scourge of cyber fraud is plaguing the netizens and institutions with an increased frequency and potency. The virtual identity of fraudsters, which becomes difficult to correlate with their identities in the real world, is increasing the difficulty for the law and regulatory authorities in securing their prosecution.² The crime rate in society reveals the vulnerabilities of that society to crime in general or to a specific crime which has seen an increase in the rates of commission. In the case of a digital society, online or cybercrimes pose an omnipresent and a potent threat to the loss of property and security of individuals, institutions and in some cases the 'State' itself. The increase in fraudulent activities during COVID-19 has not only inflicted human sufferings but also led to an enormous increase in online

fraudulent activities. A drastic increase in the phishing websites has been seen in the year 2020³ and it was a 350 percent increase from January to March.⁴ Studies reveal that the increasing incidents of URL poaching,⁵ and fake websites are enhancing the problems in particular businesses and the market sectors⁶ which badly affect the online customers and consumers thereby leading to a trust deficit.

Cybercrime can be classified into two categories. The first category is where crimes are directed on computers and can only be committed in the online world. The second category is where computers or relevant information technologies are targeted. This category contains many offline crime facilitated by information technologies.⁷ Cyber fraud, a subset of cybercrime, comes in the second category, where computers or ICTs are integral to the offence and typically involve deception for the purpose of obtaining the financial advantage.⁸

The statistics relating to cybercrime that have been present are quite revealing as to the extent of the cybercrime and its impact

1 Rick Howard, *Cyber fraud: tactics, techniques and procedures*. (CRC Press, 2009).

2 S. O. Abu, O. M. Lateef and J. Echobu, 'Determinants of Cyber Fraud Investigation in Nigeria' (2018) 2(2) *Accounting & Taxation Review*.

3 The head of the United Nations Anti-Terrorism Office highlighted a 350 percent increase in phishing websites during the year 2020. Vinod Rathore, 'Terrorist takes advantage of Corona crisis' <<https://english.newstracklive.com/news/cyber-crime-increases-dramatically-during-corona-epidemic-mc23-nu870-ta272-1111152-1.html>>.

4 Stu Sjouwerman, 'The U.N. counterterrorism chief says a 350% increase in phishing websites was reported in Q1 2020' <<https://blog.knowbe4.com/the-u.n.-counterterrorism-chief-says-a-350-increase-in-phishing-websites-was-reported-in-q1-2020>>.

5 Anirban Banerjee et al, 'Cyber-Fraud is One Typo Away', IEEE INFOCOM 2008 - The 27th Conference on Computer Communications (IEEE, 2008) 1939-1947.

6 In most of the cases URL are poached by competitors Greg Holden, *Starting an online business for dummies* (John Wiley & Sons, 2013).

7 Jacqueline M Drew and Lucy Farrell, 'Online victimization risk and self-protective strategies: developing Police-led cyber fraud prevention programs' (2018) 19(6) *Police Practice and Research* 537-549.

8 Ibid.

on society. The crime rate in Indian society in particular cybercrime is dismaying. 'Cybercrime Cell' of Ahmedabad Police has shown a receipt of over 15,300 complaints related to financial frauds from January 2020⁹. USA's Internet Crime Complaint Centre (IC3) of the Federal Bureau of Investigation (FBI) in its 'Internet Crime Report' for 2019 has placed India at the third place amongst top 20 countries based on the victims of internet crimes.¹⁰ The report shows 93,796 victims in the United Kingdom followed by 3,721 victims in Canada and 2,901 in India¹¹ were reported in 2019. The report further pointed out that with a most reported complaint of phishing and similar offences,¹² cybercrime has resulted in a loss of \$3.5 billion in 2018.

The 2019 report of the National Crime Records Bureau (NCRB) reported 27,248 cases of cybercrime in India in the year 2018¹³. The report also mentions that there were 1,34,546 cases of economic offences which include forgery, cheating & fraud followed by 20,456 cases of criminal breach of trust and 1,266 cases of counterfeiting during 2018¹⁴.

"The National Cyber Crime Reporting Portal"¹⁵

9 Vaibhav Jha, 'Gujarat turns hub of cyber crime during lockdown' <<https://indianexpress.com/article/cities/ahmedabad/gujarat-turns-hub-of-cyber-crime-during-lockdown-6570017/>>.

10 2019 Internet Crime Report, ('2019 Internet Crime Report').

11 Ibid.

12 FBI, '2019 Internet Crime Report Released- Data Reflects an Evolving Threat and the Importance of Reporting', FBI<<https://www.fbi.gov/news/stories/2019-internet-crime-report-released-021120>>.

13 Crime in IndiaIndia, ('Crime in India').

14 Ibid.

15 The Government of India took initiative to register cyber crime complaints online and thus established this online portal. This portal facilitates women and children to come forward and report crime. These reported complaints are dealt with by law enforcement agencies/ Police based on the information available in the complaints. National Cyber Crime Reporting Portal (NCCRP). Filing a Complaint on National Cyber Crime Reporting Portal. <<https://cybercrime.gov.in/Default.aspx>>.

which is a specific site developed by the Ministry of Home Affairs (MHA) for online registering of cybercrime cases has also registered a large number of complaints. However, some findings say that cyber frauds that are being committed are higher in number in comparison to their reporting.¹⁶ It is believed that the growth in the number of cybercrime activities is directly related to the increase in online activities where people operate without having acquired a sufficient knowledge of how to operate with security in the virtual world. This inability to understand cyberspace or hesitation to report incidences of cybercrime results in the reduced reporting which means the data of commission of any cyber fraud will not be reflected in the official crime statistics¹⁷.

Subsequent to the emergence of the pandemic, there has been a paradigmatic shift regarding the approach of people for using the internet for carrying out transactions. A large number of new netizens are accessing the internet for the first time every day and this includes people from all age groups, from all socio-economic backgrounds, from all levels of educational qualifications, from all levels of literacy, from all sections of the economy whether formal or informal. Statista in its study states an increase of nearly 700 million internet users across India in 2020, which makes India a country with the second-

16 Steven Kemp, Fernando Miró-Llinares and Asier Moneva, 'The dark figure and the cyber fraud rise in Europe: evidence from Spain' (2020) *European Journal on Criminal Policy and Research* 1-20.

17 Sara M. Smyth and Rebecca Carleton 'Measuring the extent of cyber-fraud: A discussion paper on potential methods and data sources' (2011) *Research and National Coordination Organized Crime Division Law Enforcement and Policing Branch Public Safety Canada*

largest internet population in the world¹⁸. This increase in online activity resulted in an increased use of “Digital Financial Services”¹⁹ led by increased online business activities²⁰ and digital transactions²¹. The increase in the number of online users in addition to this has made the internet a prime territory for cyber criminals, be they the hackers or phishers and thereby has resulted in the frequency of targeting activities by cyber criminals. These incidents can produce chilling effects on the usage of the internet by common man since if such high profile accounts having extra security features could be compromised, then how far safe are the regular users account? These miscreants are on a daily basis coming up with a new idea and tactics. As a crime cannot be eradicated in totality, cyber fraud too cannot be, but an understanding of the methods of commission or tactics appointed by the cyber fraudster can help in managing the risks.²² The problem can only be tackled when the contours of the problem are recognized and the roles of various stakeholders for enhancing cyber - security

are identified. The next section of the paper discusses the cyber-fraud incidents around the world, the general modus operandi of such crimes and thereby attempts to highlight the gravity of the problem.

Section II - Cyber Fraud Incidents around the World

One of the defining features of cyber fraud is the anonymity with which it can be carried out. These frauds can be carried out from across jurisdictions and this contributes to the anonymity of the perpetrator. However, researchers believe that a majority of fraud cases emanate from West Africa, especially from Nigeria²³.

There have been several instances of cyber fraud and they have led to huge losses for the victim. A very petrifying and terrifying incident in the history of cyber fraud occurred in Bangladesh²⁴ in February 2016, where the US \$1 billion were fraudulently transferred from the account of Bangladesh Bank in the ‘Federal Reserve Bank of New York’ and also to different accounts without any authorization.²⁵ A little of it could be recovered, but a large part of it could not be traced.²⁶

Another incident of intrusion took place in the Carbanak²⁷ where “ the hacking group steals

18 Sandhya Keelery, 'Number of internet users in India from 2015 to 2020 with a forecast until 2025' <<https://www.statista.com/statistics/255146/number-of-internet-users-in-india/>>.

19 Omar Faridi, 'COVID-19 Is Leading to Changes in Consumer Behavior such as Increased Use of Digital Financial Services, Now Supported by Banks, Globally' <<https://www.crowdfundinsider.com/2020/08/165642-covid-19-is-leading-to-changes-in-consumer-behavior-such-as-increased-use-of-digital-financial-services-now-supported-by-banks-globally/>>.

20 However research shows that people are still avoiding digital transactions. (Cashless Economy and Digitalization) (10th International Conference on Digital Strategies for Organizational Success) ('Cashless Economy and Digitalization').

21 Mc Kinsey & Company, 'Are convenience and rewards leading to a digital flashpoint? Insights from McKinsey's 2019 Digital Payments Survey' <<https://www.mckinsey.com/~media/mckinsey/industries/financial%20services/banking%20blog/are%20convenience%20and%20rewards%20leading%20to%20a%20digital%20flashpoint/mckinsey-2019-digital-payments-survey.ashx>>.

22 Shewangu Dzomira, 'Electronic fraud (cyber fraud) risk in the banking industry, Zimbabwe' (2014) 4(2) Risk governance & control: financial markets & institutions 16-26.

23 Monica T Whitty, '419 – It's just a Game: Pathways to CyberFraud Criminality emanating from West Africa' (2018) 12(1) International Journal of Cyber Criminology 97-114.

24 Bangladesh Bank Fraud. Raju Gopalakrishnan and Manuel Mogato, 'Bangladesh Bank official's computer was hacked to carry out \$81 million heist: diplomat' <<https://www.reuters.com/article/us-cyber-heist-philippines/bangladesh-bank-officials-computer-was-hacked-to-carry-out-81-million-heist-diplomat-idUSKCN0YA0CH>>.

25 Zim Zetter, 'That Insane, \$81M Bangladesh Bank Heist? Here's What We Know' <<https://www.wired.com/2016/05/insane-81m-bangladesh-bank-heist-heres-know/>>.

26 Al Jazeera, 'Hacked: The Bangladesh Bank Heist' <<https://www.aljazeera.com/programmes/101east/2018/05/hacked-bangladesh-bank-heist-180523070038069.html>>.

27 Carbanak Bank Fraud

\$1 billion from banks worldwide.”²⁸In the case of Carbanak bank fraud, the system was intruded and the databases were modified to the extent that the ATMs dispense cash²⁹ without the necessity of communicating with the terminals at the bank.³⁰ This bank fraud continued for some time and the resultant loss was about 900 million dollars for the bank and some private customers.³¹

Cyber frauds are targeting not only the large institutions and banks but also the common public in an increasingly systemic manner. Though the targeting of the common populace is at an institutional level, yet the effects are felt at the level of public resulting in the trust deficit with online channels. In an incident, 56 million credit cards were compromised between April and September 2014.³² In this case of ‘Home Depot,’ there was a malware attack and the breach has cost approximately \$62 million loss.³³ In 2013, the cybercrime that hit the ‘Target Corporation’ affected 10 million credit cardholders by stealing their data.³⁴ Another

incident happened in the year 2015 where the personal information of 20 million people was compromised when the hackers from China bypassed the security systems of the US Office of Personnel Management.³⁵ These are few instances where banking institutions were the target and a huge amount was transferred from the account fraudulently. There are several ploys that cyber fraudsters are employing for the purpose of transferring the money from innocent account holders.

Lockdown, 2020 imposed in many phases too has led to an expansion in internet usage, increased activities on social networking sites, online shopping sites and internet browsing during their free time. For maintaining social distance or to avoid cash payments in routine brick and mortar shops or doing business activities, many people switched to digital mode of payments. Every second person today has experienced a scam episode either by phone call or through message or by email etc. or even facing issues of cyber fraud which is instilling fear in them. An unprecedented hacking of several high profile Twitter³⁶ accounts including those of President Barack Obama, Joe Biden, Elon Musk, Bill Gates, Kanye West, Michael Bloomberg, and Apple is a live but terrifying example of the ingenuity of cyber criminals and the absence of proper security features in such accounts. In response to this “coordinated social engineering attack”³⁷, Twitter blocked new

28 Charlie Osborne, 'Carbanak hacking group steal \$1 billion from banks worldwide' <<https://www.zdnet.com/article/carbanak-hacking-group-steal-1-billion-from-banks-worldwide/>>.

29 Europol, 'Mastermind behind Eur 1 Billion Cyber Bank Robbery Arrested in Spain' <<https://www.europol.europa.eu/newsroom/news/mastermind-behind-eur-1-billion-cyber-bank-robbery-arrested-in-spain>>.

30 Matt Burgess, 'Inside the takedown of the alleged €1bn cyber bank robber' <<https://www.wired.co.uk/article/carbanak-gang-malware-arrest-cybercrime-bank-robbery-statistics>>.

31 PYMNTS, 'How 100 Banks Got Hacked And Lost \$900 Million' <<https://www.pymnts.com/news/2015/how-100-banks-got-hacked-and-lost-900-million/>>.

32 Kate Vinton, 'With 56 Million Cards Compromised, Home Depot's Breach Is Bigger Than Target's' <<https://www.forbes.com/sites/katevinton/2014/09/18/with-56-million-cards-compromised-home-depots-breach-is-bigger-than-targets/#5f4917b23e74>>.

33 Michael Winter, 'Home Depot hackers used vendor log-on to steal data, e-mails' <<https://www.usatoday.com/story/money/business/2014/11/06/home-depot-hackers-stolen-data/18613167/>>.

34 Reuters, 'Target Settles 2013 Hacked Customer Data Breach For \$18.5 Million' <<https://www.nbcnews.com/business/business-news/>

target-settles-2013-hacked-customer-data-breach-18-5-million-n764031>.

35 Brendan I. Koerner, 'Inside the Cyberattack That Shocked the US Government' <<https://www.wired.com/2016/10/inside-cyberattack-shocked-us-government/>>.

36 2020 Twitter BitcoinScam took place on July 15, 2020.

37 Associated Press, 'Twitter accounts of Bill Gates, Jeff Bezos, Elon Musk hacked in Bitcoin scam' <<https://economictimes>

tweets from all verified accounts and blocked all compromised accounts. In this incident, there were around 130 accounts targeted³⁸ where one “fake tweet offered to send \$2,000 for every \$1,000 sent to an anonymous Bitcoin address”³⁹.

Modus Operandi/Tactics of Committing Cyber Fraud

The year 2020 appears to be very different from the previous years in the sense that the nature and frequency of crimes will probably undergo a phenomenal change. A different picture of the crime rates may also emerge in the year 2020 and it may affect the statistics of the National Crime Records Bureau (NCRB)⁴⁰. The report may evince a sharp decline in the commission of certain traditional crimes such as robberies, kidnapping, abductions, road rage, chain and mobile phone snatching etc., while on the other hand, the rates of various cybercrimes may increase. This means that the routine crimes that took place through offline mode are likely to be reduced in number while an escalation in the rate of online or cybercrimes can occur. A study finds that the rates of traditional crimes and cybercrimes are inversely correlated as when the rates of traditional crimes drop, the rates of cybercrimes move up and vice-versa.⁴¹ The

indiatimes.com/magazines/panache/people/kannada-actor-chiranjeevi-sarja-dies-at-39/articleshow/76248306.cms.

38 Twitter Support, 'Twitter Support', Twitter (Blog Post) <<https://twitter.com/TwitterSupport/status/1283957911841054721>>.

39 Associated Press (n 39)

40 Vallabh Ozarkar, 'City's crime graph drops in lockdown' <<https://mumbai.Indiatimes.com/mumbai/crime/citys-crime-graph-drops-in-lockdown/articleshow/78196824.cms>>.

41 Stefano Caneppele and Marcelo F. Aebi, 'Crime Drop or Police Recording Flop? On the Relationship between the Decrease of Offline Crime and the Increase of Online and Hybrid Crimes' 13(1) Policing: A Journal of Policy and Practice 66-79.

reasons for staggering growth in the cases of cybercrime, with the reduction in the rates of traditional crimes, can be attributed to the changed lifestyle and the changes in the routine activities of the people, for as much they are staying a very little time on the streets outside their homes, and spending more time on the internet.⁴² The opportunities have been in a sense, so to say, snatched from the traditional criminals and been handed to the cyber criminals. A steep spike in online fraudulent activities is much in evidence today. The FBI's 'Internet Crime Complaint Center (IC3)' report points out that criminals are not doing any new fraudulent activity instead deploying new tactics very wisely to defraud people,⁴³ which makes catching them more complicated day by day. The fraudsters are now more creative in cheating consumers of their hard-earned money and they deploy new techniques and mechanisms. There are several case studies that detail the tactics or ploys applied by cyber criminals to defraud the people of their hard-earned money.⁴⁴ Some of the techniques that have been employed by cyber-criminals to achieve the purpose are being detailed below.

There is a bombardment of duplicates/ phoney sites with just addition or subtraction of alphabet. Use of these phoney sites or fake websites⁴⁵ which imitate popular websites

42 Howard (n 3)

43 FBI (n 14)

44 Chris Fox, 'Tea at the Ritz soured by credit card scammers' <<https://www.bbc.com/news/technology-53793922>>.

45 Omar Faridi, 'Over 300,000 Potentially Fraudulent Sites with Fake Celeb Endorsements Identified by UK's National Cyber Security Centre, Half were Related to Cryptocurrency' <<https://www.crowdfundinsider.com/2020/08/165313-over-300000->

is now a common tactic by which fraudsters try to extract personal information from unsuspecting users, or simply advertise for some sale of products to users⁴⁶ and thereby deceive customers⁴⁷.

Cyberspace is developing its own criminal marketplaces and financial arrangements⁴⁸ for the commission of cyber fraud. A recent incident in Australia details how fraudsters used 'WhatsApp' media and convinced users to hand over their personal details. The scammers used the WhatsApp account of a user to send messages to her contacts where after getting the code from the person in contact they logged his account with a new device, resulting in impersonation.⁴⁹ However, it is just one of many that have seen the scam has exposed the extent of risk to the netizens.⁵⁰ The research in Australia shows cybercrime rose during the COVID-19 lockdown in parallel with the increase in the use of social media use which soared by 62 per cent during this period.⁵¹ However, the

data of other countries is not much different from this.

Amongst various patterns of the cyber-attacks, the common and most popular method is the use of social media for making advertisements⁵² and thereby trick people.⁵³ Many people are receiving emails from fake mail ids in the names of their friends, relatives⁵⁴ or colleagues who solicit money for Covid-19 treatment etc. Similarly, fraudulent calls⁵⁵ have also increased which are supposedly from different government departments⁵⁶ but they impersonate people from such departments or calls with the offers of consumers' assistance⁵⁷ in many online activities or for online bill payments.⁵⁸

potentially-fraudulent-sites-with-fake-celeb-endorsements-identified-by-uks-national-cyber-security-centre-half-were-related-to-cryptocurrency/>.

46 Banerjee et al (n 7)

47 Suresh Golani, 'Cyber frauds: Man loses Rs 14 lakh to online fraud' <<https://www.freepressjournal.in/mumbai/cyber-frauds-man-loses-rs-14-lakh-to-online-fraud>>.

48 Alan Doig Michael Levi, Rajeev Gundur, David Wall, Matthew Williams, 'Cyberfraud and the implications for effective risk-based responses: themes from UK research' (2016) 67(1) Law and Social Change 77-96.

49 Ankita Chakravarti, 'Scammers impersonating as WhatsApp are sending messages to users, do not fall for it' <<https://www.indiatoday.in/technology/news/story/scammers-impersonating-as-whatsapp-are-sending-messages-to-users-do-not-fall-for-it-1682818-2020-05-28>>.

50 Australians have lost almost Australian \$ 100 million in 2020. Humphries Glen Humphries, 'Scammers take Australians for almost \$100 million so far this' <<https://www.illawarramercury.com.au/story/6881303/scammers-take-australians-for-almost-100-million-so-far-this/>>.

51 Helen Frost, 'The sly WhatsApp scam that's convincing Aussies to handover their password details - and why you may not have even

noticed' DAILY MAIL

52 In an Incident "fraudsters are targeting social media users from a page named "Asda Gifts" using sponsored adverts that offer the free voucher". Judy Johnson, 'Asda scam warning: Shoppers targeted on Facebook with £1,000 voucher scamAsda scam warning: Shoppers targeted on Facebook with £1,000 voucher scam') <<https://www.express.co.uk/life-style/life/1328073/asda-scam-voucher-facebook-social-media>>.

53 A cardiologist at AIIMS received an email (spoofed) from the head of department's account asking her to donate by buying Amazon gift cards where she lost around Rs. 3 lakh. Times News Network, 'Cyber crooks dupe AIIMS doc of Rs 3L in name of donation' <<https://timesofindia.indiatimes.com/city/delhi/cyber-crooks-dupe-aiims-doc-of-rs-3l-in-name-of-donation/articleshow/77828023.cms>>.

54 K V Kurmanath, 'How a cyber criminal clique created fake IDs of dead techies, stole money' <<https://www.thehindubusinessline.com/info-tech/how-a-cyber-criminal-clique-created-fake-ids-of-dead-techies-stole-money/article30771618.ece>>.

55 Priyanka Navalkar, 'Cyber Fraud: Fraudster avails loan in victim's name, dupes him of over Rs 1 lakh' <<https://www.freepressjournal.in/mumbai/cyber-fraud-fraudster-avails-loan-in-victims-name-dupes-him-of-over-rs-1-lakh>>.

56 State Times News, 'Cyber Police overreached complainants from Jammu; saved Rs 3 lakh from scammers' <<https://news.statetimes.in/cyber-Police-overreached-complainants-from-jammu-saved-rs-3-lakh-from-scammers/>>.

57 Vijay Kumar Yadav, 'KYC fraud: Mumbai senior citizen duped by cyber fraudster of Rs 3.18 lakh' <<https://www.hindustantimes.com/india-news/kyc-fraud-mumbai-senior-citizen-duped-by-cyber-fraudster-of-rs-3-18-lakh/story-ISRheOZmls8YRwCZ3jzcPN.html>>.

58 Navneet Dubey, 'Beware of these 4 frauds while making payments via UPI amid lockdown' <<https://economictimes.indiatimes.com/wealth/save/beware-of-these-6-frauds-while-making-payments-via-upi-amid-lockdown/articleshow/75671798.cms>>.

These calls ask customers to click on the link specially generated for easy payment.⁵⁹ Assistance in online payment may be a modus operandi for the fraudsters.⁶⁰ Even a mere call may also lead to the loss of money.⁶¹ Online fake job offers,⁶² call for the KYC (Know Your Customer) updation,⁶³ or asking for the personal information⁶⁴ credit card scams,⁶⁵ offers of short term loans or re-scheduling of monthly installments payments,⁶⁶ calls from a network service provider for a better and cheaper tariff plan⁶⁷ are many frequently used methods of fraudsters. People may receive messages with information of deduction of certain amount⁶⁸ where they will be asked to

click on the link for getting complete details⁶⁹ resulting in loss of crucial information that may be compromised later in losing money. Deceptive emails with an offer of a huge cash prize⁷⁰ or recent benefits in treatment etc. pertaining to COVID-19⁷¹ or using fear⁷² are various ways chosen by miscreants.⁷³ The UK Finance has shown concern of increasing fraudulent activities during the corona virus pandemic since fraudsters are using this crisis period to manipulate people in giving out their essential details which can be used for impersonation.⁷⁴

While electronic mailing is a very popular and common mode of committing crime, text messages, smishing, fake websites, and pharming⁷⁵ are too in the list. The objective of these fraudulent practices is to extract bank account details or credit card details or if possible money from consumers' bank accounts, mobile or e-wallets. Stealing credit card details through phishing or by asking to click on the links that are sent through text

59 Farhan Shaikh, 'Senior citizen duped of ₹5.54 lakh in online fraud' <<https://www.hindustantimes.com/cities/senior-citizen-duped-of-5-54-lakh-in-online-fraud/story-HegnvizKTI4OK4xpkpHdEM.html>>.

60 In Gurugram recently an incident of cyber scam has been reported where a woman senior citizen was victimised by a scammer. This woman lives alone and pays all her utility and credit card bills through cheque. She received several calls from her telecom service provider about the non-payment of her bill and was also refused acceptance of payment through cheque but was asked to pay online. Owing to her inability to use online payment mode she accepted help to make the online payment of her bills offered by a telecaller who misrepresented himself as the same telecom service provider. Thus believing him she provided all credit card details necessary for executing the payment. She was duped. Pushpa Girimaji, 'Lockdown leads to decline in crime, but sharp hike in online fraud' <<https://www.hindustantimes.com/cities/lockdown-leads-to-decline-in-crime-but-sharp-hike-in-online-fraud/story-BBF4RNJJNjFL0YG74sHxgM.html>>.

61 Pragna L Krupa, 'No OTP, no SMS, they can steal your money with a phone call' <<https://bangaloremirror.indiatimes.com/bangalore/cover-story/no-otp-no-sms-they-can-steal-your-money-with-a-phone-call-too/articleshow/72357054.cms>>.

62 13 youths from Uttar Pradesh duped nearly one lakh people from various states by offering fake jobs and other services on online classified ads web portals and social media. Anuja Jaiswal, 'UP: 13 youths held in Agra for using online classified ads' <<https://timesofindia.indiatimes.com/city/agra/up-13-youths-held-in-agra-for-using-online-classified-ads-portal-to-dupe-people-on-pretext-of-offering-jobs/articleshow/77823605.cms>>.

63 Yogesh Sapkale, 'How Not to be a Victim of Online KYC Frauds' <<https://www.moneylife.in/article/how-not-to-be-a-victim-of-online-kyc-frauds/61096.html>>.

64 Banerjee Tamaghna Banerjee, 'Kolkata: Three arrested for home loan fraud from New Town bank' <<https://timesofindia.indiatimes.com/city/kolkata/kolkata-three-arrested-for-home-loan-fraud-from-new-town-bank/articleshow/77398869.cms>>.

65 Fox (n 46)

66 Girimaji (n 62)

67 Ibid.

68 Tania Jaleel, 'Has your bank account been debited for a

transaction you haven't done? Here's what to do' <<https://economictimes.indiatimes.com/wealth/save/has-your-bank-account-been-debited-for-a-transaction-you-havent-done-read-this/articleshow/61577976.cms?from=mdr>>.

69 Ajay Kumar, 'Danger online: Fraud link can empty your account' <<https://www.indiatoday.in/mail-today/story/danger-online-fraud-link-can-empty-your-account-1601079-2019-09-20>>.

70 Bridget Small, 'Prize scams in your mailbox' <<https://www.consumer.ftc.gov/blog/2016/09/prize-scams-your-mailbox>>.

71 Cristina Miranda, 'Scammers are using COVID-19 messages to scam people' <<https://www.consumer.ftc.gov/blog/2020/04/scammers-are-using-covid-19-messages-scam-people>>.

72 Brian Monroe, 'UK banking group reveals top ten Covid-19 frauds, including impersonating government agencies, dating app romance scams' <<https://www.acfcs.org/uk-banking-group-reveals-top-ten-covid-19-frauds-including-impersonating-government-agencies-dating-app-romance-scams/>>.

73 Gulf Times, 'Cyber fraud gang that stole nearly QR10mn busted' <<https://www.gulf-times.com/story/671424/Cyber-fraud-gang-that-stole-nearly-QR10mn-busted>>.

74 Monroe (n 74)

75 India stands third among top 20 cybercrime victims, says report (n

messages or emails are amongst other popular methods of committing cyber fraud. Thus once the details are compromised, the victim ultimately loses his/her hard-earned money.

As a bank customer one can also be a target for the commission of cyber fraud. There are specific instances where it happens that when an account is opened through an online channel, identity theft takes place and a false account is opened. However, these cyber frauds can be minimised through human intervention during the account opening process, in an offline fashion. There is also the possibility of cyber fraud during the online operation of such an account like the addition of a beneficiary or change of address. Also with the help of personal documents, one cannot ignore the possibility of threats like account takeover, fraudulent address entry etc.

Cyber fraud may take place during the payment if initiated through online mode. A customer can be a victim of a host of cyber frauds such as card skimming; card duplication (cloning); fake pin pad which can lead to compromising the PIN of the customer; malware attacks in the computer or other online devices such as mobiles. And a possibility of cyber fraud is when making a deposit which may lead to money laundering or transfer of money to a different account. Further, the balance can be inflated through malware in the computer.

In the context of the above analysis, it is necessary to investigate the role of the various stakeholders of cyber security. The

next section deals with the role of individuals and banking institutions in tackling the menace of cybercrime.

Section III - Role of Individual, Institution in Regulatory Architecture for Controlling Cyber Fraud

Role of Individual

The Internet obscures geographic and legal barriers and thereby creates a playground for the fraudsters in borderless space to be fully explored for online accomplishments. The fraudster may commit crime from anywhere against anyone and thus remains unbooked by the laws of any such nations where such offences take place. This global nature of cyberspace/internet raises an issue of its regulation by any individual legal entity.⁷⁶ In the absence of any such power or possibility, an individual plays a very crucial role in avoiding any incident of cyber fraud by contributory means. Vigilant, aware and prompt in taking action, netizens may save not only themselves from fraudulent victimisation but also many in the chain. A banking institution in the absence of any fault on its part may not be held liable if an unaware consumer/user leads to the offence of cyber fraud. The Supreme Court of California in 'Apple Inc. v The Superior Court of Los Angeles County',⁷⁷ opined that the "consumers should bear the risk of online credit card fraud and identity theft."⁷⁸ The role of an individual or prospective victim cannot

76 Patricia Stolfi, 'Caveat Emptor: Regulating the On-Line Medicine Man in the New Frontier ' (2000) 17(1) Journal of Contemporary Health Law and Policy.

77 Apple Inc. v. Superior Court, 292 P.3d 883 (Cal. 2013).

78 Jr James John Shield, 'Apple, Inc. v. Superior Court: Caveat Emptor: The Future of Online Credit Card Transactions' (2015) 13(4).

be ignored as his promptness may change not only his faith but also of the fraudsters.

Cyber Security Policy of India requires a mechanism in the age of cyber for protecting data from compromise by the external parties.⁷⁹ The policy mandates that “protecting cyberspace is a shared responsibility”⁸⁰ and cyberspace entrusts everyone with a responsibility to at least keep their own space secure which when followed by everyone leads to the security of all.⁸¹ An emphasis on technology-neutral policy was also placed by Indian cyber security policy with an insistence that the policy may provide an opportunity to individuals or organisations etc. as the case may be to have their own security measures based on their own technical and other requirements to fight with the issues and danger.⁸²

Cyber security policy emphasizes that not all attacks need special security measures thus a precautionary protection may reduce the risk in many threats even at the individual level;⁸³ the principle applies in the cases of cyber frauds. This creates a liability on the government to educate the public on cyber hygiene, safe computing etc.⁸⁴

Institution in Regulatory Architecture - The Reserve Bank (RBI) on controlling Cyber Fraud

Today information technology is part and parcel of the banking business and the

banking industry is utilising it in almost all of its operations. Internet utilization and cyber-fraud increases risk in banking operations, and also exacerbates security issues thereby undermining the public confidence in it. The increasing number of cases of financial crimes and cyber fraud needs attention. Thus “to meet the changing threat milieu, bringing at the latest international standards relating to the governance of IT, and incorporate information security measures to tackle cyber fraud apart from enhancing independent assurance about the effectiveness of IT controls”⁸⁵ a ‘Working Group on Information Security, Electronic Banking, Technology Risk Management and Cyber Frauds’ headed by the executive director Mr. G. Gopalakrishna was constituted by the Reserve Bank of India (RBI). This working committee had produced its report in January 2011 which is popularly known as the ‘Gopalakrishna Committee Report’.⁸⁶ There were several recommendations of the ‘Working Group’ on IT Governance; Information Security; IT operations; IT outsourcing; IS Audit; Business Continuity Planning (BCP); Customer Education; Cyber Fraud and Legal Issues. Based on these recommendations of the committee, the Reserve Bank (RBI) had provided guidelines⁸⁷ on several aspects of electronic banking including that on maintaining security of information and risk management to prevent cyber-frauds, wherein it was indicated that the measures

79 National Cyber Security Policy -2013 India, ('National Cyber Security Policy -2013').

80 Ibid.

81 Ibid.

82 Ibid.

83 Ibid.

84 Ibid.

85 Working Group on Information Security, Electronic Banking, Technology Risk Management and Cyber Frauds Mumbai (Reserve Bank of India, ('Working Group on Information Security, Electronic Banking, Technology Risk Management and Cyber Frauds').

86 Ibid.

87 Circular DBS.CO.ITC.BC.No.6/31.02.008/2010-11 dated April 29, 2011

suggested for implementation cannot be static and banks need to proactively create, fine-tune or modify their policies, procedures and technologies based on new developments and emerging concerns. For IT governance the 'working group' suggested the formulation of a 'Board' within the banks. The board is entrusted with certain key functions that include approval of IT strategy⁸⁸ for banks and contriving of document for regular management of IT functions.⁸⁹ The 'working group' emphasized the importance of having an isolated self-contained structure of information security management isolated through information security procedures and functions.⁹⁰ These procedures should be congruous with 'the nature and size of activities of banks',⁹¹ extent of IT leverage and use of e-delivery channels⁹² for products. On IT operations, the emphasis of the working group was on identification of threats and vulnerabilities inherent in the provisioning of business services for customers. The recommendation of the working group was to conduct periodic risk assessment to identify vulnerabilities in the operations and thereafter implement measures that are in compliance with regulatory requirements and are adaptable to their business environment.

Based on the report, Reserve Bank of India (RBI) asked for 24x7 operational conducive IT security systems in banks. The system should be well-staffed, active, regularly updated on the latest nature of emerging cyber threats.

88 Board level IT Strategy

89 (n 87)

90 Ibid.

91 Ibid.

92 Ibid.

The banks are directed to be careful in business or operational requirements and should comprehensively address network and database security. The databases and networks should be behind manual control and there should be a well-defined procedure for access to such databases and networks which should invariably be closed in case of default conditions being met.

RBI mandated banks to put in place a cyber-security (CS) policy elucidating the strategy containing an appropriate approach to combatting cyber threats. The CS policy should have taken into account the level of complexity of the business, acceptable levels of risks and other associated factors that may have an impact on the security such as management and culture etc. before it gets approval of the Board. The cyber-security (CS) policy needs to be distinct from the broader IT policy / IS Security Policy. Banks are asked to ensure the confidentiality and integrity of customer data. They are required to keep continuous surveillance through the Security Operations Centre (SOC) by setting up and operating a Security Operations Centre (SOC) to monitor and manage cyber risks in real-time.

The RBI has also provided banks with the Cyber Crisis Management Plan (CCMP) as a major directive to the banks. 'Cert-In' a national nodal agency that has been in operation since 2004⁹³ brought the National Cyber Crisis Management Plan (CCMP) and Cyber Security Assessment Framework (CSAF). Cert-In was constituted according to section 70

93 Cert-In. <<https://www.cert-in.org.in>/<https://cert-in.org.in/>>

B⁹⁴ of the Information Technology Act, 2000 by the Central Government and according to the power given therein. Cyber Crisis Management Plan (CCMP) should address the four aspects that include (i) Detection (ii) Response (iii) Recovery and (iv) Containment. Directions further include taking effective measures to prevent cyber-attacks and to promptly detect any cyber-intrusions so as to respond/recover/contain the fallout.

The banks are directed to be prepared against cyber-threats such as 'zero-day' attacks, remote access threats, targeted attacks, distributed denial of services (DDoS), ransom ware/ crypto ware, destructive malware, business email frauds including spam, email

phishing, spear phishing, whaling, vishing frauds, drive-by downloads, browser gateway fraud, ghost administrator exploits, identity frauds, memory update frauds, password related frauds, etc. As part of cyber security preparedness, the banks need to report all unusual cyber-security incidents (whether they were successful or were attempts which did not fructify) to the Reserve Bank of India. Cyber security awareness among stakeholders can also form a part of cyber security preparedness indicators.

The banks are directed to submit both summary level information as well as details on information security incidents including cyber-incidents. Banks are entrusted with the liability to report material gaps in controls with the proposed measures that the banks are planning to undertake for the purpose of improving cyber security in their operations. For managing the cyber security threats in banks the organizational set-up has to be timely reviewed and modified. Organizational arrangements and set-ups are important for Cyber-security awareness among stakeholders / Top Management / Board.

Cyber security cannot be achieved unless the entire organization is trained to handle cyber operations properly, including people in the top management to the customers. The efforts of the government of India, RBI and the banks are in this direction. However, the regulatory structure for the management of cyber-security in banks needs an overhaul.

While cyber fraud has to be tackled through proactive screening and copious security

94 Section- 70B of Information Technology Act, 2000 70B - Indian Computer Emergency Response Team to serve as national agency for incident response. - (1) The Central Government shall, by notification in the Official Gazette, appoint an agency of the Government to be called the Indian Computer Emergency Response Team. (2) The Central Government shall provide the agency referred to in sub-section (1) with a Director-General and such other officers and employees as may be prescribed. (3) The salary and allowances and terms and conditions of the Director-General and other officers and employees shall be such as may be prescribed.(4) The Indian Computer Emergency Response Team shall serve as the national agency for performing the following functions in the area of cyber security,- (a) collection, analysis and dissemination of information on cyber incidents; (b) forecast and alerts of cyber security incidents; (c) emergency measures for handling cyber security incidents; (d) coordination of cyber incidents response activities; (e) issue guidelines, advisories, vulnerability notes and whitepapers relating to information security practices, procedures, prevention, response and reporting of cyber incidents; (f) such other functions relating to cyber security as may be prescribed. (5) The manner of performing functions and duties of the agency referred to in sub-section (1) shall be such as may be prescribed. (6) For carrying out the provisions of sub-section (4), the agency referred to in sub-section (1) may call for information and give direction to the service providers, intermediaries, data centres, body corporate and any other person. (7) Any service provider, intermediaries, data centres, body corporate or person who fails to provide the information called for or comply with the direction under sub-section (6), shall be punishable with imprisonment for a term which may extend to one year or with fine which may extend to one lakh rupees or with both. (8) No court shall take cognizance of any offence under this section, except on a complaint made by an officer authorised in this behalf by the agency referred to in sub-section (1).] CERT-IN (Computer Emergency Response Team) is nodal agency- India, is a Government entity and has been taking important initiatives in strengthening cyber-security by providing proactive & reactive services as well as guidelines, threat intelligence and assessment of preparedness of various agencies across the sectors, including the financial sector.

measures, the necessity of a legal framework to apprehend and prosecute cyber-criminals forms an important part of the overall cyber security framework. A resilient legal framework for managing cyber security matters and crimes goes a long way towards preventing cybercrimes. The next section discusses the legal and regulatory framework for managing cyber-issues and crimes.

Section IV - Regulatory Framework

Cyber space provides a frequent and enormous 'interstate communication' where millions of users can interact in many jurisdictions effortlessly.⁹⁵ This increasing frequency leads to complexity which cannot be resolved as cyberspace lacks any uniform laws. The "principles of state independence, sovereignty and territorial integrity,"⁹⁶ give these different jurisdictions in cyberspace to exercise the authority "to make laws binding on things and all persons within its geographical entity, called a country".⁹⁷ The difference of legal framework in each jurisdiction carries an issue of conflict of laws that leads to the failure to resolve the dispute or an incident of cyber fraud/crime occurring in between two parties belonging to two different jurisdictions.

The jurisdictional issues in attending to the menace of cybercrime has led to the negotiation of several treaties at the international level since tackling the spread of cybercrime is beyond the capacity of

individual nations. The next sub-section discusses the regional and national initiatives that have been taken to tackle the menace of cybercrime and the cyber frauds.

Regional Initiatives

The cognizance to introduce a uniform law on cybercrime could actualise only in 2001 with 'Council of European Convention on Cybercrime, 2001' comprising 47 European member states decided to put in place the first international 'Convention on Cybercrime' and drafted the convention in conjunction with the USA, Canada, and Japan. The Convention alternatively referred to as 'Budapest Convention' is the first transnational instrument on crimes committed online which 'aims principally at-

- (1) harmonising the domestic criminal substantive law elements of offences and connected provisions in the area of cybercrime,
- (2) providing for domestic criminal procedural law powers necessary for the investigation and prosecution of such offences as well as other offences committed by means of a computer system or evidence in electronic form,
- (3) setting up a fast and effective regime of international cooperation.

"To promote the harmonization and unification of international trade law,"⁹⁸ the first international instrument, a model law on electronic commerce, 1996 came into

95 Richard H. Ackert, 'Choice-of-Law Questions in Cyberfraud' (1996) 1996(1) University of Chicago Legal Forum: .

96 E. F. G. Ajayi, 'Challenges to enforcement of cyber-crimes laws and policy' (2016) 6(1) Journal of Internet and Information Systems 1-12.

97 Ibid.

98 United Nations Commission on International Trade Law, 'UNCITRAL model law on electronic commerce, with guide to enactment, 1996 : with additional article 5 bis as adopted in 1998' (1999) New York : United Nations.

existence.⁹⁹ Many countries framed their laws in the light of the provisions of the model law. India too based provisions of the Information Technology Act, 2000 on model law on electronic commerce, 1996 which was later amended in 2008.

In the absence of any international instrument governing cyberspace, the issues of cybercrimes are posing challenges to every nation. Thus a common criminal law policy if adopted by all countries concerned similar to the initiative of 'European' nations as 'European Convention can help in fighting against cybercrime.

There are some regional efforts also to counter the cybercrime issues that include initiatives by "The Asia-Pacific Economic Cooperation (APEC).¹⁰⁰" The forum has a goal¹⁰¹ of the economic prosperity of the region. The forum recognised information and communications technology (ICT), as a very important medium/ tool for the business, trade and ultimately economic growth and is thus the mandate of the APEC Telecommunications and Information Working Group (TEL). In the furtherance of its mandate TEL in 2002 issued the 'APEC Cyber Security Strategy'¹⁰². The strategy document has focused on many key important areas such as cybercrime legislation, security and technical guidelines, public awareness, and training and education.

99 Ibid.

100 The NATO-CCDCOE accredited cyber defence hub and is the NATO Cooperative Cyber Defence Centre of Excellence. CCDCOE, 'About Us' <<https://ccdcoe.org/about-us/>>.

101 Goal - "to support sustainable economic growth and prosperity in the Asia-Pacific region (APEC). The Asia-Pacific Economic Cooperation (APEC), 'Mission Statement' <<https://www.apec.org/About-Us/About-APEC/Mission-Statement.aspx>>.

102 APEC Cyber Security Strategy, APEC Telecommunications and Information Working Group ('APEC Cyber Security Strategy').

For improving information infrastructures in 2005 'Lima Declaration' was issued at the 'APEC Telecommunications and Information Ministerial Meeting'¹⁰³. This Declaration has not only addressed network security but also emphasised the establishment of computer emergency response teams (CERTs). To ensure access of information technology to everyone, harmonising frameworks for securing transactions and communications, and combating cybercrime, APEC Economic Leaders adopted the "APEC Strategy to Ensure a Trusted, Secure and Sustainable Online Environment."¹⁰⁴

Established in 1990 the 'APEC Telecommunications and Information Working Group (TEL WG)' is working for the building of information and communication technology (ICTs) infrastructure and service.¹⁰⁵ APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020 contains a vision, an objective, guidelines, priority areas and implementation policy etc. with a focus on cyber security issues in the age of rapid advancement in information technology.¹⁰⁶ The Organization for Economic Co-operation and Development's (OECD) 'Working Party on Security and Privacy in the Digital Economy' initiated a multi-stakeholder process in 2012, the purpose of which was to

103 Lima Declaration - The Sixth Apec Ministerial Meeting on the Telecommunications and Information Industry (Telmin6)Lima, Peru), ('Lima Declaration - The Sixth Apec Ministerial Meeting on the Telecommunications and Information Industry (Telmin6)').

104 APEC Economic Leaders 'APEC Strategy to Ensure Trusted, Secure and Sustainable Online Environment' <<https://ccdcoe-admin.aku.co/wp-content/uploads/2018/11/APEC-051101-StrategyOnlineEnvironment.pdf>>.

105 APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020, ('APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020').

106 APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020, ('APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020').

review the '2002 Guidelines for the Security of Information Systems and Networks: Towards a Culture of Security'.¹⁰⁷ This review recommendation was adopted by the OECD Council in September 2015¹⁰⁸ and the OECD council was called into action due to the large-scale digital security incidents with potential economic consequences.¹⁰⁹ The Recommendation of 2015 is complemented by the recommendations of December 2019.¹¹⁰

Indian Regulation

Indian laws don't define cyber fraud. In the absence of any statutory definition, it is difficult to understand what constitutes cyber fraud. Cyber fraud cannot be defined by stating that fraud that takes place in the physical world when transferred to the cyber world becomes cyber fraud. This is a very imprecise and imperfect definition or description. Cyber fraud is distinct in one important aspect of real-world fraud. In a real-world fraud, fraud is committed by the individual concerned. In the case of cyber fraud, while the victims can be stated in some cases as irresponsible on account of being careless, but primarily cyber fraud relies upon the cyber system in which it is being conducted. This makes cyber fraud distinct from real-world fraud. In the case of real-world fraud, in most cases the system cannot

be held responsible for the same, however, in case of cyber fraud in most high profile cases, it is some kind of system error caused leading to the commission of the crime. The question that has to be asked is in the case of the cyber world, if the manufacturer of a cyber-system fails, can responsibility be fixed upon him that the manufacturer didn't warn? Can responsibility be fixed upon any of the social media sites that they are not responsible enough to safeguard data or they allow links to reach the victim? In the cyber world as in the real world, the responsibility is that of the perpetrator of cybercrimes and not of the intermediary. It is difficult to be carried out, leaving out cases of carelessness or where the victim is not fully aware of if the system is secure.

Cyber fraud can be described, based on various activities carried out by the fraudster. Nevertheless, the extent of fraud victimization¹¹¹ is also a contributing factor in the definition. Cyber-frauds or cyber-scams are frauds that exploit mass communication technologies such as email, instant messenger, and social networking sites to trick people. Many designate it a hybrid crime¹¹² due to its commission in two spaces, the real space and cyberspace. The growth and expansion in cyberspace is very rapid and enormous and thus uncontrolled for the fraudulent activities which may take place internationally. In cyber fraud, fraudsters are constructing new ways to hack victims' personal and crucial financial information then appropriate

107 Security of Information Systems and Networks, ('Security of Information Systems and Networks').

108 Digital Security Risk Management for Economic and Social Prosperity OECD Recommendation and Companion Document, ('Digital Security Risk Management for Economic and Social Prosperity OECD Recommendation and Companion Document').

109 Recommendation of the Council on Digital Security of Critical Activities, ('Recommendation of the Council on Digital Security of Critical Activities').

110 Ibid.

111 John L. McMullan, 'Cyber Fraud, Online Poker, and Order-Maintenance in Virtual Worlds' (2012) 16(3) Gaming Law Review and Economics.

112 Stefano Caneppele and Aebi (n 43)

them for their use.¹¹³ In the absence of any statutory definition or understanding of cyber fraud, Indian courts apply provisions of 'Indian Penal Code' in most of the cases. For conceptualising Indian perspective on fraud section 17¹¹⁴ of the Indian Contract Act, 1872 could be referred, which contains the element of intent to deceive. Thus fraud is an act or omission which is intended to cause wrongful gain to one person and wrongful loss to the other, either by way of concealment of facts or otherwise. The definition contains the element of intentional deceiving. This definition is applicable in either contractual matters only or matters which may lead to the establishment of the contractual relationship. For the commission of cyber frauds and similar ploys in cyberspace existing criminal law is 'the Indian Penal Code, 1860' (IPC). 'The Indian Penal Code, 1860' under various provisions makes certain fraudulent activities punishable under sections 403 - 406, section 409, sections 415-418, section 420, section 463 and section 465. Section 403¹¹⁵ of the 'Indian Penal Code, 1860' makes dishonest misappropriation of the property a punishable offence. Section 405¹¹⁶ of the Indian Penal Code defines criminal breach of trust and makes dishonest misappropriation or conversion of property, or dishonest use or disposes of property in violation of any direction of law a punishable offence under section 406.¹¹⁷ The section provides an enhanced punishment under

section 409¹¹⁸ if the offence of criminal breach of trust is committed by a public servant or by a banker or merchant or agent. This section will be applicable when cyber fraud is committed with the help of or by bankers or bank employees or people taking care of the accounts of account holders or handles important crucial sensitive data/information and thus disposes of that data/ information for the commission of online (offline) fraudulent activities.

Section 415¹¹⁹ of Indian Penal Code, 1860 (IPC) defines 'Cheating' which is punishable under section 417¹²⁰ of Indian Penal Code, 1860. An offence of cheating is committed when a person deceives others or fraudulently or dishonestly induces to deliver any property etc. Under various provisions of Indian Penal Code, 1860 different acts of cheating are punishable with enhanced punishments. This includes cheating by impersonation, which defined under section 416.¹²¹ The offence is punishable under section 419¹²². The offence of cheating by impersonation is committed when any person cheats by pretending to be some other person, knowingly substitutes or misrepresents himself as another. The fake calls in the name of service providers etc. or fake electronic mails on behalf others (relative, friends or colleagues), or by representing oneself as a bank employee, customer care executive etc. would be covered under section 419 of the Indian Penal

113 Morgan Rennie, 'What is Cyber Fraud?' <<https://www.delta-net.com/compliance/fraud-awareness/faqs/what-is-cyber-fraud>>.

114 Section 17 in The Indian Contract Act, 1872 Act No. 9 of 1872

115 Section 403 The Indian Penal Code, 1860, Act No. 45 of 1860

116 Section 405 The Indian Penal Code, 1860, Act No. 45 of 1860

117 Section 406 The Indian Penal Code, 1860, Act No. 45 of 1860

118 Section 409 The Indian Penal Code, 1860, Act No. 45 of 1860

119 Section 415. Cheating The Indian Penal Code, 1860, Act No. 45 of 1860.

120 Section 417 Punishment for cheating. The Indian Penal Code, 1860, Act No. 45 of 1860.

121 Section 416 The Indian Penal Code, 1860, Act No. 45 of 1860

122 Section 419 The Indian Penal Code, 1860, Act No. 45 of 1860

Code, 1960. Section 418¹²³ punishes cheating with the knowledge that wrongful loss may ensue to a person whose interest the offender is bound to protect whereas, section 420¹²⁴ punishes cheating and dishonestly inducing delivery of property.¹²⁵

Section 418 of IPC is applicable to offences where the offence is committed by employees or agents as they are in the possession of crucial information of bank customers and their disclosure may result in a serious loss to the customers, ATM fraud is when information shared by bank employees, will be covered under this section. Section 463¹²⁶ of IPC defines 'Forgery' as an intentional act to cause damage or injury by the creation of false documents or false electronic record, which is punishable under section 465¹²⁷.

Cyber fraud takes place while using internet or electronic devices such as computers, mobile phones, various applications/apps, social sites. It invites provisions of "The Information Technology Act, 2000 (IT Act)". The applicable provisions are under section 43, 66, 43A 65, 66C and 66D. Section 43¹²⁸ prescribes a penalty and compensation for any mentioned act if performed unauthorized on the computer, computer system, etc. There is a list of activities which are prohibited and anyone who does these mentioned acts without permission of the owner or in-charge of a computer, computer system or computer

network is liable under this section. Section 43 is a civil wrong; however, if the same offence is committed dishonestly or fraudulently, then the doer shall be punished under section 66¹²⁹ of the Information Technology Act, 2000. Here "dishonestly" and "fraudulently" shall have the same meaning as assigned to it in section 24 and section 25 of the Indian Penal Code (45 of 1860) respectively.¹³⁰ Very recently a case¹³¹ was filed in the High Court of Judicature, Patna, under section 66 and with several other provisions of the Information Technology Act. In this case the petitioner contended that there were as many as 87 fraudulent transactions between specific periods but he didn't receive any mobile message from the bank which shows the connivance of the Bank officials in the alleged transactions. The case raised a very important issue of liability of bank officials if the bank failed to inform its customer about any such transaction that took place in the account of the account holder.

Section 43A¹³² fixes liability on a body corporate, if it is negligent in protecting data and its negligence results in wrongful loss or wrongful gain to any person and thus asks for compensation. The section is civil in nature.

Chapter XI of the Information Technology Act, 2000 contains the provisions of offences. The offence of identity theft is placed in this chapter under section 66C¹³³. This section¹³⁴

123 Section 418 The Indian Penal Code, 1860, Act No. 45 of 1860

124 Section 420 The Indian Penal Code, 1860, Act No. 45 of 1860

125 Section 420 Cheating and dishonestly inducing delivery of property. The Indian Penal Code, 1860, Act No. 45 of 1860.

126 Section 463 Forgery. The Indian Penal Code, 1860, Act No. 45 of 1860.

127 Section 465 The Indian Penal Code, 1860, Act No. 45 of 1860.

128 Section 43 in The Information Technology Act, 2000

129 Section 66 The Information Technology Act, 2000.

130 Explanation Section 66 The Information Technology Act, 2000.

131 Sonu Kumar vs. The State of Bihar (High Court of Judicature, Patna)25 February, 2020

132 Section 43A The Information Technology Act, 2000.

133 Section 66C The Information Technology Act, 2000.

134 Section 66C The Information Technology Act, 2000.

punishes fraudulent or dishonest use of the “electronic signature, password or any other unique identification feature of any other person”¹³⁵. This section is applicable to all the cases where personal information like password or any unique identification feature is stolen by phishing, vishing, smishing, pharming, credit card skimming, etc. Creating a fake duplicate account or creating multiple email-ids in someone else’s name are quite commonly used tactics for stealing data that cyber fraudsters are using for committing the offence of cyber fraud. In a case¹³⁶ decided by Delhi High Court, the court expressed the concerns for the inadequacy of laws to deal with offences such as phishing, however, the court decided the case and observed

“..no legislation in India on ‘phishing’. An act which amounts to phishing, under the Indian law would be a mis-representation made in the course of trade leading to confusion as to the source and origin of the email causing immense harm not only to the consumer but even the person whose name, identity or password is misused. It would also be an act of passing off as is affecting or tarnishing the image of the plaintiff, if an action is brought by the aggrieved party.....”¹³⁷

Creation of fake websites is also popular modus operandi used since the last decades. Section- 66D¹³⁸ prescribes punishment for cheating by impersonation by using computer resources if anyone does it by

135 Ibid

136 National Association Of Software vs Ajay Sood And Ors 119 (2005) DLT 596

137 National Association Of Software vs Ajay Sood And Ors 119 (2005) DLT 596

138 Section 66D The Information Technology Act, 2000

means of any communication device or computer resource. Section 65¹³⁹ of IT Act, 2000 punishes tampering with computer source documents. In ‘Sanjay Kumar v. the State of Haryana’¹⁴⁰ the Punjab-Haryana High Court restored the judgment of the trial court and held the accused had forged the electronic document. The court found in this case the tampering with the computer source documents and alterations in the information stored in the computer resource and thus accused guilty of Sections 65 and 66 of the Information & Technology Act, 2000 read with provisions of Sections 420, 467, 468 and 471 of the Indian Penal Code.

The computer is an inalienable part of life and is used by every sector of the society and thus provides equal access and equal opportunities to everyone leading to the growth and development. Yet the challenges to the investigating and prosecuting authorities are quite high. The globalised connection of cyber fraud poses challenges to the investigation and sometimes some crimes need to be investigated by the specialised agency. In India these cases are investigated by the Central Bureau of Investigation (CBI) and “CBI being a central agency with pan-India presence and links with the Interpol; has the wherewithal and mandate to investigate the crime in question, if the Court so directs”¹⁴¹. However, the court specified that for the investigation to be done by CBI the grievance of the complainant/victim must not be of private nature.

139 Section 65 The Information Technology Act, 2000

140 Sanjay Kumar vs. State of Haryana CRR No. 65 of 2013 (O&M)

141 Ali Ibrahim vs. The State Of Kerala. WP(C).No. 11125 of 2015 (M)

The number of fraud registration is crucial for any investigation. In the year 2018, the Indian government launched its 'National Cyber Crime Reporting Portal' for citizens to register their complaints online. Under this initiative, cyber cells in various cities across the country have also been training Police and government employees how to handle digital security incidents and increase public awareness at the same time. Thus registering a crime and then its investigation got a direction.

Section V - Conclusion

The prevalence and impact of cyber fraud have become a global issue. The exponential increase in mind-boggling innovative techniques of commissioning cyber fraud is not merely posing immense and terrific challenges to the investigating machinery but also increasing the concerns of global government. Cyberspace has never respected the geographical borders principles and forced international bodies to come forward with a common policy to curb the menace. 'Council of European Convention on Cybercrime, 2001 is still there as the only convention to deal with the issues of cybercrime. Absence of any further efforts amongst the nation makes the situation worse. However regional efforts by 'The Asia-Pacific Economic Cooperation (APEC)' and endeavour of the 'Organization for Economic Co-operation and Development's (OECD)' show the concern of global society, but the expansion in the criminal and fraudulent activities in the year 2020 have exposed the profundity of these efforts.

The national investigating and prosecuting authorities face numerous challenges due to the absence of any definitions of cyber fraud under the existing laws. There are endless ways of cheating people and in such a situation inadequacy of laws is posing challenges to combat cyber fraud. Investigating officers investigate these crimes under various provisions under existing laws and in the absence of grave punishment the spunk and fearlessness are so high that fraudsters are uncontrolled in the commission of these crimes. Any straight-tight jacket cannot be provided to define cyber fraud and to cover all the cases in one definition is not just difficult but a challenge as some wrongs are of private nature and against private individuals while some affect the public as a whole. A chapter on cyber fraud containing varying provisions for different acts needs to be incorporated through an amendment in the Information Technology Act, 2000. Further, the liability of intermediaries in some cases needs to be created in financial matters and accordingly a provision of the same needs to be included by an amendment in the IT Act, 2000. However, in the absence of any such laws, an act of awareness of people may play a vital role in preventing victimisation.

The Reserve Bank of India has issued directives from time to time to the banking institution and advisories to people for keeping their money safe thereby reducing the risk of commission of cyber fraud. There is a need on the part of banks to be quintessential in performing their duties towards banking customers while strictly abiding by the guidance of RBI. Since a more vigilant public

can reduce the risk of cyber fraud, policy and planning to create awareness on means and mechanisms to stay safe from cyber scams is much needed with the laws on cyber fraud.

The lack of awareness on cyber hygiene leads to critical digital vulnerabilities and inadequacy of traditional crime reaction methods while being aware carries responsibility as it may infect others if not cured on time, thus awareness on the matter may help in reducing the risk of victimisation of that second individual. It is, therefore, necessary that banks should have a policy of creating awareness amongst the stakeholders so that cyber security threats can be addressed through prevention mechanisms.

Most cyber frauds incidents go unreported or if reported, unresolved owing to the reason, infrastructure and process to tackle such cases are largely inadequate. This possibility diminishes as soon as cyber fraudsters traverse geographical boundaries. The difference in legal and regulatory infrastructure amongst nations, the issues of conflict of the forum and conflict of laws make it more complicated to resolve the dispute and to ensure justice to the victims. These conditions are similar in other countries. The Bangladesh bank fraud or Carbanak case etc. are very befitting examples, as in most of these cases the lost money in cyber fraud could not be recovered completely rather a very small amount could be recovered.

Cyber security strategies are still in the early phases in most of the nations including India. People and organizations have started adopting cyber methods for their activities,

but it is still a long way to go till people start understanding the modus operandi of the cyber criminals and the enforcement agencies start getting an the upper hand on such criminals. The exposed tactics and techniques of fraudsters for defrauding within and outside India reveal one thing that the primary line of defence should be to delay the payment - most of the users are not business account holders dealing in financial derivatives where payment by a certain time is important. Nothing is going to happen if payment is delayed by a few hours or a day. In case of activities which are suspicious, delaying the transaction to complete it at a later time is advisable while immediately reporting the transaction to the authorities. Timely action may result in an indemnification if proper precautions are taken and thus have established that the fault was not contributory or self-induced. The operating motto for cyber financial transactions is 'Delay in case of doubt'. The window of opportunity for cyber criminals is very short. If they miss this window, they are very unlikely to come back for then their cyber footsteps are more susceptible to be backtracked. Genuine business payments would necessarily provide time - they have to - they are building customers instead of money. In the case of businesses, particularly small businesses, "a comprehensive enterprise-wide approach¹⁴² to fraud management"¹⁴³ is missing which has become a contributing factor. Thus an enterprise-wide approach of protection through fraud management policy may

142 This includes a comprehensive IT infrastructure that enables enterprise-wide, real-time, and cross-channel monitoring and management capabilities.

143 Dzomira (n 24)

contribute to reducing the risk of commission of offence towards customers.

As far as the laws go, they are still evolving and would need time to evolve. As the concerns are magnified not only at the domestic or national level but at the international level too in the absence of any global machinery to handle the case, cyber security can only be achieved if there is a global effort for the same nevertheless, managing this global effort would take time. There is a requirement for a new cooperative treaty for dealing with the issues of cybercrime. A joint effort is needed for addressing cybercrime challenges. While the law can address the cyber-crime challenges, it has to take care of the privacy of individuals and therefore keeping privacy in mind, the law has to evolve to address the challenges.

References

(APEC), The Asia-Pacific Economic Cooperation, 'Mission Statement' <<https://www.apec.org/About-Us/About-APEC/Mission-Statement.aspx>>

Abu, S. O., O. M. Lateef and J. Echobu, 'Determinants of Cyber Fraud Investigation in Nigeria' (2018) 2(2) *Accounting & Taxation Review*

Ajayi, E. F. G., 'Challenges to enforcement of cyber-crimes laws and policy' (2016) 6(1) *Journal of Internet and Information Systems* 1-12

Al Jazeera, 'Hacked: The Bangladesh Bank Heist' <<https://www.aljazeera.com/programmes/101east/2018/05/hacked-bangladesh-bank-heist-180523070038069.html>>

APEC Economic Leaders 'APEC Strategy to Ensure Trusted, Secure and Sustainable Online Environment' <<https://ccdcoc-admin.aku.co/wp-content/uploads/2018/11/APEC-051101-StrategyOnlineEnvironment.pdf>>

APEC Cyber Security Strategy, APEC Telecommunications and Information Working Group

Lima Declaration - The Sixth Apec Ministerial Meeting on the Telecommunications and Information Industry (Telmin6)Lima, Peru,

APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020,

Associated Press, 'Twitter accounts of Bill Gates, Jeff Bezos, Elon Musk hacked in Bitcoin scam' <<https://economictimes.indiatimes.com/magazines/panache/people/kannada-actor-chiranjeevi-sarjadies-at-39/articleshow/76248306.cms>>

Banerjee, Anirban et al, 'Cyber-Fraud is One Typo Away', *IEEE INFOCOM 2008 - The 27th Conference on Computer Communications* (IEEE, 2008) 1939-1947

Banerjee, Tamaghna, 'Kolkata: Three arrested for home loan fraud from New Town bank

<<https://timesofindia.indiatimes.com/city/kolkata/kolkata-three-arrested-for-home-loan-fraud-from-new-town-bank/articleshow/77398869.cms>>

Burgess, Matt, 'Inside the takedown of the alleged €1bn cyber bank robber' <<https://www.wired.co.uk/article/carbanak-gang-malware-arrest-cybercrime-bank-robbery-statistics>>

CCDCOE, 'About Us' <<https://ccdcoc.org/about-us/>>

Chakravarti, Ankita, 'Scammers impersonating as WhatsApp are sending messages to users, do not fall for it' <<https://www.indiatoday.in/technology/news/story/scammers-impersonating-as-whatsapp-are-sending-messages-to-users-do-not-fall-for-it-1682818-2020-05-28>>

Company, Mc Kinsey &, 'Are convenience and rewards leading to a digital flashpoint? Insights from McKinsey's 2019 Digital Payments Survey' <<https://www.mckinsey.com/~media/mckinsey/industries/financial%20services/banking%20blog/are%20convenience%20and%20rewards%20leading%20to%20a%20digital%20flashpoint/mckinsey-2019-digital-payments-survey.ashx>>

Dubey, Navneet, 'Beware of these 4 frauds while making payments via UPI amid lockdown' <<https://economictimes.indiatimes.com/wealth/save/beware-of-these-6-frauds-while-making-payments-via-upi-amid-lockdown/articleshow/75671798.cms>>

Dzomira, Shewangu, 'Electronic fraud (cyber fraud) risk in the banking industry, Zimbabwe' (2014) 4(2) *Risk governance & control: financial markets &*

institutions 16-26

Europol, 'Mastermind behind Eur 1 Billion Cyber Bank Robbery Arrested in Spain') <<https://www.europol.europa.eu/newsroom/news/mastermind-behind-eur-1-billion-cyber-bank-robbery-arrested-in-spain>>

Faridi, Omar, 'COVID-19 Is Leading to Changes in Consumer Behavior such as Increased Use of Digital Financial Services, Now Supported by Banks, Globally') <<https://www.crowdfundinsider.com/2020/08/165642-covid-19-is-leading-to-changes-in-consumer-behavior-such-as-increased-use-of-digital-financial-services-now-supported-by-banks-globally/>>

Faridi, Omar, 'Over 300,000 Potentially Fraudulent Sites with Fake Celeb Endorsements Identified by UK's National Cyber Security Centre, Half were Related to Cryptocurrency') <<https://www.crowdfundinsider.com/2020/08/165313-over-300000-potentially-fraudulent-sites-with-fake-celeb-endorsements-identified-by-uks-national-cyber-security-centre-half-were-related-to-cryptocurrency/>>

FBI, '2019 Internet Crime Report Released- Data Reflects an Evolving Threat and the Importance of Reporting', *FBI* <<https://www.fbi.gov/news/stories/2019-internet-crime-report-released-021120>>

Fox, Chris, 'Tea at the Ritz soured by credit card scammers') <<https://www.bbc.com/news/technology-53793922>>

Frost, Helen, 'The sly WhatsApp scam that's convincing Aussies to handover their password details - and why you may not have even noticed' *DAILY MAIL*

Girimaji, Pushpa, 'Lockdown leads to decline in crime, but sharp hike in online fraud') <<https://www.hindustantimes.com/cities/lockdown-leads-to-decline-in-crime-but-sharp-hike-in-online-fraud/story-BBF4RNJJNjFLoyG74sHxgM.html>>

Golani, Suresh, 'Cyber frauds: Man loses Rs 14 lakh to online fraud') <<https://www.freepressjournal.in/mumbai/cyber-frauds-man-loses-rs-14-lakh-to-online-fraud>>

Working Group on Information Security, Electronic Banking, Technology Risk Management and Cyber Frauds Mumbai (Reserve Bank of India,

Gulf Times, 'Cyber fraud gang that stole nearly QR10mn busted') <<https://www.gulf-times.com/>

[story/671424/Cyber-fraud-gang-that-stole-nearly-QR10mn-busted](https://www.gulf-times.com/story/671424/Cyber-fraud-gang-that-stole-nearly-QR10mn-busted)>

Holden, Greg, *Starting an online business for dummies* (John Wiley & Sons, 2013)

Howard, Rick, *Cyber fraud: tactics, techniques and procedures*. (CRC Press, 2009)

Humphries, Glen, 'Scammers take Australians for almost \$100 million so far this') <<https://www.illawarramercury.com.au/story/6881303/scammers-take-australians-for-almost-100-million-so-far-this/>>

2019 Internet Crime Report,

Jacqueline M Drew and Lucy Farrell, 'Online victimization risk and self-protective strategies: developing Police-led cyber fraud prevention programs' (2018) 19(6) *Police Practice and Research* 537-549

Jaiswal, Anuja, 'UP: 13 youths held in Agra for using online classified ads') <<https://timesofindia.indiatimes.com/city/agra/up-13-youths-held-in-agra-for-using-online-classified-ads-portal-to-dupe-people-on-pretext-of-offering-jobs/articleshow/77823605.cms>>

Jaleel, Tania, 'Has your bank account been debited for a transaction you haven't done? Here's what to do') <<https://economictimes.indiatimes.com/wealth/save/has-your-bank-account-been-debited-for-a-transaction-you-havent-done-read-this/articleshow/61577976.cms?from=mdr>>

James John Shield, Jr, 'Apple, Inc. v. Superior Court: Caveat Emptor: The Future of Online Credit Card Transactions' (2015) 13(4)

Jha, Vaibhav, 'Gujarat turns hub of cyber crime during lockdown') <<https://indianexpress.com/article/cities/ahmedabad/gujarat-turns-hub-of-cyber-crime-during-lockdown-6570017/>>

Johnson, Judy, 'Asda scam warning: Shoppers targeted on Facebook with £1,000 voucher scam Asda scam warning: Shoppers targeted on Facebook with £1,000 voucher scam') <<https://www.express.co.uk/life-style/life/1328073/asda-scam-voucher-facebook-social-media>>

Keelery, Sandhya, 'Number of internet users in India from 2015 to 2020 with a forecast until 2025') <<https://www.statista.com/statistics/255146/number-of-internet-users-in-india/>>

Koerner, Brendan I., 'Inside the Cyberattack That

Shocked the US Government') <<https://www.wired.com/2016/10/inside-cyberattack-shocked-us-government/>>

Krupa, Pragna L, 'No OTP, no SMS, they can steal your money with a phone call') <<https://bangaloremirror.indiatimes.com/bangalore/cover-story/no-otp-no-sms-they-can-steal-your-money-with-a-phone-call-too/articleshow/72357054.cms>>

Kumar, Ajay, 'Danger online: Fraud link can empty your account') <<https://www.indiatoday.in/mail-today/story/danger-online-fraud-link-can-empty-your-account-1601079-2019-09-20>>

Kurmanath, K V, 'How a cyber criminal clique created fake IDs of dead techies, stole money') <<https://www.thehindubusinessline.com/info-tech/how-a-cyber-criminal-clique-created-fake-ids-of-dead-techies-stole-money/article30771618.ece>>

McMullan, John L., 'Cyber Fraud, Online Poker, and Order-Maintenance in Virtual Worlds' (2012) 16(3) *Gaming Law Review and Economics*

Michael Levi, Alan Doig, Rajeev Gundur, David Wall, Matthew Williams, 'Cyberfraud and the implications for effective risk-based responses: themes from UK research' (2016) 67(1) *Law and Social Change* 77-96

National Cyber Security Policy -2013India,

Miranda, Cristina, 'Scammers are using COVID-19 messages to scam people') <<https://www.consumer.ftc.gov/blog/2020/04/scammers-are-using-covid-19-messages-scam-people>>

Monica T Whitty, '419 – It's just a Game: Pathways to CyberFraud Criminality emanating from West Africa' (2018) 12(1) *International Journal of Cyber Criminology* 97-114

Monroe, Brian, 'UK banking group reveals top ten Covid-19 frauds, including impersonating government agencies, dating app romance scams') <<https://www.acfcs.org/uk-banking-group-reveals-top-ten-covid-19-frauds-including-impersonating-government-agencies-dating-app-romance-scams/>>

Navalkar, Priyanka, 'Cyber Fraud: Fraudster avails loan in victim's name, dupes him of over Rs 1 lakh') <<https://www.freepressjournal.in/mumbai/cyber-fraud-fraudster-avails-loan-in-victims-name-dupes-him-of-over-rs-1-lakh>>

Osborne, Charlie, 'Carbanak hacking group steal \$1

billion from banks worldwide') <<https://www.zdnet.com/article/carbanak-hacking-group-steal-1-billion-from-banks-worldwide/>>

Ozarkar, Vallabh, 'City's crime graph drops in lockdown') <<https://mumbaimirror.indiatimes.com/mumbai/crime/citys-crime-graph-drops-in-lockdown/articleshow/78196824.cms>>

Cashless Economy and Digitalization) (10th International Conference on Digital Strategies for Organizational Success)

PYMNTS, 'How 100 Banks Got Hacked And Lost \$900 Million') <<https://www.pymnts.com/news/2015/how-100-banks-got-hacked-and-lost-900-million/>>

Raju Gopalakrishnan and Manuel Mogato, 'Bangladesh Bank official's computer was hacked to carry out \$81 million heist: diplomat') <<https://www.reuters.com/article/us-cyber-heist-philippines/bangladesh-bank-officials-computer-was-hacked-to-carry-out-81-million-heist-diplomat-idUSKCN0YA0CH>>

Rathore, Vinod, 'Terrorist takes advantage of Corona crisis') <<https://english.newstracklive.com/news/cyber-crime-increases-dramatically-during-corona-epidemic-mc23-nu870-ta272-1111152-1.html>>

Rennie, Morgan, 'What is Cyber Fraud?') <<https://www.delta-net.com/compliance/fraud-awareness/faqs/what-is-cyber-fraud>>

Reuters, '

Target Settles 2013 Hacked Customer Data Breach For \$18.5 Million') <<https://www.nbcnews.com/business/business-news/target-settles-2013-hacked-customer-data-breach-18-5-million-n764031>>

Richard H. Ackert, 'Choice-of-Law Questions in Cyberfraud' (1996) 1996(1) *University of Chicago Legal Forum*:

Sapkale, Yogesh, 'How Not to be a Victim of Online KYC Frauds') <<https://www.moneylife.in/article/how-not-to-be-a-victim-of-online-kyc-frauds/61096.html>>

Sara M. Smyth and Rebecca Carleton 'Measuring the extent of cyber-fraud: A discussion paper on potential methods and data sources' (2011) *Research and National Coordination Organized Crime Division Law Enforcement and Policing Branch Public Safety Canada*

Shaikh, Farhan, 'Senior citizen duped of ₹5.54 lakh

in online fraud') <<https://www.hindustantimes.com/cities/senior-citizen-duped-of-5-54-lakh-in-online-fraud/story-HegnviZKTI4OK4xpkpHdEM.html>>

Sjouwerman, Stu, 'The U.N. counterterrorism chief says a 350% increase in phishing websites was reported in Q1 2020') <<https://blog.knowbe4.com/the-u.n.-counterterrorism-chief-says-a-350-increase-in-phishing-websites-was-reported-in-q1-2020>>

Small, Bridget, 'Prize scams in your mailbox') <<https://www.consumer.ftc.gov/blog/2016/09/prize-scams-your-mailbox>>

State Times News, 'Cyber Police overreached complainants from Jammu; saved Rs 3 lakh from scammers') <<https://news.statetimes.in/cyber-Police-overreached-complainants-from-jammu-saved-rs-3-lakh-from-scammers/>>

Stefano Caneppele and Marcelo F. Aebi, 'Crime Drop or Police Recording Flop? On the Relationship between the Decrease of Offline Crime and the Increase of Online and Hybrid Crimes' 13(1) *Policing: A Journal of Policy and Practice* 66-79

Steven Kemp, Fernando Miró-Llinares and Asier Moneva, 'The dark figure and the cyber fraud rise in Europe: evidence from Spain' (2020) *European Journal on Criminal Policy and Research* 1-20

Stolfi, Patricia, 'Caveat Emptor: Regulating the On-Line Medicine Man in the New Frontier' (2000) 17(1) *Journal of Contemporary Health Law and Policy*

Support, Twitter, 'Twitter Support', *Twitter* (Blog Post) <<https://twitter.com/TwitterSupport/status/1283957911841054721>>

APEC Telecommunications and Information Working Group Strategic Action Plan 2016-2020,

*Crime in India*India,

Security of Information Systems and Networks,

Digital Security Risk Management for Economic and Social Prosperity OECD Recommendation and Companion Document,

Recommendation of the Council on Digital Security of Critical Activities,

Times News Network, 'Cyber crooks dupe AIIMS doc of Rs 3L in name of donation') <<https://timesofindia.indiatimes.com/city/delhi/cyber-crooks-dupe-aiims-doc-of-rs-3l-in-name-of-donation/articleshow/77828023.cms>>

United Nations Commission on International Trade Law, 'UNCITRAL model law on electronic commerce, with guide to enactment, 1996 : with additional article 5 bis as adopted in 1998' (1999) *New York : United Nations*

Vinton, Kate, 'With 56 Million Cards Compromised, Home Depot's Breach Is Bigger Than Target's') <<https://www.forbes.com/sites/katevinton/2014/09/18/with-56-million-cards-compromised-home-depots-breach-is-bigger-than-targets/#5f4917b23e74>>

Winter, Michael, 'Home Depot hackers used vendor log-on to steal data, e-mails') <<https://www.usatoday.com/story/money/business/2014/11/06/home-depot-hackers-stolen-data/18613167/>>

Yadav, Vijay Kumar, 'KYC fraud: Mumbai senior citizen duped by cyber fraudster of Rs 3.18 lakh') <<https://www.hindustantimes.com/india-news/kyc-fraud-mumbai-senior-citizen-duped-by-cyber-fraudster-of-rs-3-18-lakh/story-ISRheOZmls8YRwCZ3jzcPN.html>>

Zetter, Zim, 'That Insane, \$81M Bangladesh Bank Heist? Here's What We Know') <<https://www.wired.com/2016/05/insane-81m-bangladesh-bank-heist-heres-know/>>

Police Behavioural Cauldron- Need for Improvement In Service Conditions



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

RC Sharma¹

Ishita Sharma²

Abstract

Police behaviour is reflection of societal values. An honest society with high moral values will have Police with similar values, contented, satisfied, well behaved and vice-versa is equally true. Behaviour is the parameter/benchmark through which individuals and society judge and form opinion about individuals in the group and about the group as an organisation. The Police is the basic tool available with the state to execute the will of state, ensure maintenance of law and order and adherence to rules and regulations for smooth running of administration and society. The paper digs deeper and analyses the factors that influence the working of the law enforcement personnel of the country and on the basis of the analysis puts forth suggestions to improve the public image of the major law enforcement body of the country i.e. Police force.

Keywords: Behaviour, Law, Order, Police, Society.

Introduction

1. Police behaviour is a reflection on societal values. An honest society with high moral values will have Police with similar values, contented, satisfied, well behaved and vice-versa is equally true. Behaviour is the parameter/benchmark through which individuals and society judge and form opinion about individuals in the group and about the group as an organisation. Generally, behaviour implies how a person as an individual and a group behaves within an organisation. The Police are the basic tool available with the state to execute the will of state and

ensure maintenance of law and order and adherence to rules and regulations for smooth running of administration and society. In the case of Police, both at the level of leadership at higher/middle level and men at lower level, behaviour implies functional ethos within an organisation and outside organisation while dealing with public in different situations.

2. Police service is one of the most difficult and challenging services as far as foot soldier, constable on ground is concerned. The boots on ground are less and need is for more which is never fulfilled. He leads a very difficult and stressful life. He has

Author's Intro:

1. Commandant (retd.), B.S.F.
2. Assistant Professor, School of Law, University of Petroleum and Energy Studies, Dehradun

to deal with angry mob, political rallies, religious congregations, traffic control, CI operations, and VIP duty as well as do extra constitutional and menial jobs. Police personnel withstand the worst of criticism from general public, human right groups, opposition, own government, courts, own Police leadership and even neighbours see them with suspicion. There is a saying famous in Indian society which gives an impression as to how public at large perceive Police "POLICE WALE KI NA DOSTI ACCHI AUR NA DUSHMANI ACCHI". The criticism is sometimes justified and sometimes unjustified. However little effort has gone into studying as to why a Policeman who is one amongst us behaves in a manner which is perceived by society at large as wrong/incorrect/ unjustified, why society sees him with disdain and fears him.

3. The author has his own impressions about Police behaviour as a student wherein during a cricket match at Burlton Park Jalandhar, he saw Policemen extorting rupees two to five from anyone entering the stadium by climbing through the iron pillars of score board without a ticket. Police were behaving towards students like lawbreakers instead of stopping them from wrongdoing.
4. Police men behave irrationally, use excessive force, act in contravention of lawful orders, violate human rights and get involved in fake encounter. This needs a detailed study and analysis of various environmental factors both internal and

external in which Police work which shape a Policeman's behaviour.

Internal and External Environmental Factors Influencing Behaviour

5. Environmental factors like service conditions, work environment and societal values are the ones, which affect a Policeman as an individual and determine how he behaves. Environmental factors both internal and external, which affect Policemen's personality, need studies and analysis:-

Internal Environmental Factors

6. **Recruitment/Entry System-** No one joins Police service as a constable, Head Constable, Sub-Inspector from elite/rich families. It is middle class, lower middle class youth from villages, towns and cities who join Police service. The moot question is about the fairness of system of selection. Has the entry of individual been through honest and fair system or through dishonest means? If the entry is through honest means on merit without any monetary, caste, regional or political considerations, the individual's behaviour will be honest, upright, helping as per norms of civility and within parameters of law and constitution unless impacted by other internal environmental factors. In case it is through dishonest means, his priority will be to satisfy his and his masters' needs who recruited him as under:-

- (a) Entry through corruption-In case an individual enters service through

dishonest means, his immediate priority from service is to make up for the money paid as corruption for recruitment. He moulds his behaviour accordingly. Later, it becomes a habit and part of his behaviour. He makes earning ill-gotten money as motto, to earn money through corruption. Its overall analysis portrays image of Police as an organisation, which is corrupt.

- (b) Entry through Caste, Regional and Political Considerations- It is common truth known to all that in Police recruitment regional, caste and political factors play a very significant role. Those recruited based on these considerations more than merit develop factor-based bias, which is portrayed in their day-to-day functional behaviour. Such beneficiaries treat public as a pawn, pay back masters, and benefit personally too. The brunt of their biased behaviour is borne by citizens and the losers are Police as an organization.

7. Organisation - The behaviour of Policemen is also shaped and affected by the way Police department , Police leadership and government look after Policemen ,their welfare, their needs as propounded in Maslow's Hierarchy of needs¹ as under:-

¹ John W Newstrom, Organizational Behaviour: Human Behaviour at Work, Tata Mc Graw Hill Education Private Limited, Delhi, p105.

(a) Lower Order Needs

- (i) First level of needs involve survival and physiological needs of food, air, water and sleep.
 - (ii) The second need level is safety and security need that tend to dominate his body safety involving work environment. It also involves economic security involving working conditions like pay, job security, administrative protection, retirement plans.
- (b) Higher Order Needs- As per Maslow there are three levels of higher order needs
- (i) The third level, which shapes attitude, behaviour and motivation, is belonging and social needs, which encompass love, belonging and social environment at work (friendship and compatible associates).
 - (ii) The fourth level is status and esteem needs including one's feeling of self-worth and competence. The feeling of competence comes from assurance of others i.e. through praise for good work. It gives status and shapes positive or negative behaviour.
 - (iii) The fifth level need is self-actualization and fulfilment needs which means becoming what, one is capable of becoming, by

using one's skills to fullest and stretching talent to maximum

8. Leadership - There is a saying in Military/CAPF Parlance "No unit is good or bad. If officers are good, unit is good and if officers are bad, unit is bad". It aptly applies to Police too. The hierarchy of Police leadership for constable is his head constable, Sub Inspector, Inspector or maximum Deputy Superintendent of Police. What kind of qualitative leadership they provide and their conduct shapes the behaviour of a Police constable. Do they reward him for good work? Does he remain isolated from the rest since he is honest? Does his family feel proud of him or his positive work ethic leads to their indirect mental and physical harassment? The character and quality of leadership also shapes his behaviour. Now it is for Police brass to carry out an analysis of quality of leadership.

External Environmental Factors

9. Political Environment - The political environment has politicised the Police. It is a fact that political environment imprints Police functioning at national, state, district and block levels. The postings and transfers in states of district level Police officers and station house officers are done based upon the recommendations of ministers and members of Legislative assembly of ruling party. Similarly, the lower level functionaries have political affiliations. These political affiliations dictate their behaviour and attitude. They willingly perform extra constitutional

duties at the behest of politicians to remain in their good books. Sometimes, they do not do what is expected from them and do what they are not expected to do. Both ways society see them with suspicion and disdain as they behave abnormally against norms.

10. Societal Environment - The Police are a reflection of society. Police constable comes from society, which he is to Police. In law-abiding societies, the Policemen sincerely follows law, ensures that citizens are served and not harassed and vice-versa is also true. In a developed society, like Chandigarh, the citizens are better traffic compliant and Policemen also ensure that they help public whereas in backward areas ruled by gangs, Policemen also connive with law breakers and make violation of laws as a tool to earn from violators instead of making them law compliant through persuasion and legal means. Standard of education of particular region, male/female population ratio, Employment opportunities also dictate Police conduct and behaviour.

How Environmental Factors Dictate Behavioural Abberations / Pattern of Policeman in General

11. Environmental factors play a great role in shaping the behaviour and response of Policeman as individual and as group. This response becomes projection of Police as organisation in the eyes of public. Generally, no citizen wants to visit a Police station and sees Police as villain or negative part of society. Even I have

heard a senior Police officer of UP cadre now retired, commenting in private that he would not like to visit a Police station after retirement fearing humiliation and misbehaviour. Generally, it is a common impression that Police behave in an abnormal and highhanded manner towards anonymous/common citizens. Courteous behaviour is reserved for rich, influential and those having political connections. Why such impression which spreads negativity? How have environmental factors contributed to shaping negative Police behaviour? Police at all levels have to be shielded from negatives of internal and external environmental factors to make it a model and efficient law and order machinery which common man can trust. Following reforms/improvements are suggested to make Police a potent, positive and professional force in the eyes of public, which unfortunately it is not in present day environment:-

(a) Police recruitment - The recruitment is done in each state based upon authorisation and vacancies. Normally recruitment process is protracted and more than merit, many extraneous factors dictate recruitment. Political interference and subsequent blame game mar Police recruitment. As a result, recruitment done by one particular government is set aside by another government and is challenged in court. Therefore, the beginning of a fresh recruit is on a wrong note. There is a need to insulate

Police recruitment from corruption and political interference. What how? Since law and order is a state subject and Police recruitment falls in states domain, new recruitment structure need to be established by taking states on board concerning procedure and yardsticks for Police recruitment in new recruitment structure. For bringing honesty and transparency in Police recruitment of non-gazetted ranks, each state government may form a Police commission for the purpose of superintendence and control over Police recruitment. The composition of Police commission be such that no political interference is there in Police recruitment. Composition of commission be decided by centre and states through consensus, which should be legally binding on all states.

(b) State of Satisfaction index- Fulfilment of Needs-Policeman is not the Shakti man and is a normal human being like us who has social responsibilities and family to take care of from the analysis of data compiled by BPR&D as DATA ON POLICE ORGANISATIONS as on 01 Jan 2019, it can be derived that satisfaction index of a Police man is very low. He is dissatisfied, stressed and harassed due to working conditions and his inability to look after family and social obligations properly. A lot needs to be done to improve his work environment and satisfaction index.

Let's see all parameters:-

- (i) POPULATION PER POLICE PERSON (PPP) -Population per Police person against sanctioned total Police (civil+DAR+Armed) during the year 2018 is 503.27 as compared to 518.27 in the previous year. The highest ratio is 1,302.26 in Dadra & Nagar Haveli. Police officer who has to Police 500 plus people as individual cannot be expected to perform miracles. Rather the kind of policing burden on him will certainly turn him behaviourally abnormal as also his family.
- (ii) AREA PER POLICE PERSON (APP) (IN SQKMS)-Area per Police person (in Sq. Kms) against sanctioned total Police (Civil+DAR+Armed) during the year 2018 is 1.27 Kms, same as last year. The highest ratio 5.75 is in Arunachal Pradesh.
- (iii) STATE/UT WISE TOTAL POLICE PER LAKH POPULATION (SANCTIONED) (CIVIL+DAR+ARMED)-As on 01 Jan 2019 as per data, Dadra and Nagar Haveli has got 76.79 Police person, the lowest and Manipur has got 1314.84 Police person per lakh of population. The all India average comes to 360.77 Police person per lakh. The data depicts pathetic Police population ratio as also poor state of Policeman who has to Police this population. This means in D&N Haveli one Policeman has got 1303.25 persons to Police and in Manipur he has got 76 persons to Police. All India average per Police person comes to 277.18 citizens per Policeman to Police. The deficiencies further compound the workload of Policeman. This certainly makes his service very difficult, affect his behaviour and conduct with fellow citizens and also within organisation.
- (iv) POLICE HOUSING- As per available data as on 01 Jan 2019, actual strength of state Police forces is 20.67 lakh. Out of which 13.03 lakh are civil Police, 2.66 lakh are district armed Police and remaining 4.98 lakh are state armed Police. Now if the housing for Policemen is taken into account, as per data, the total number of family quarters available with state / UTs Police forces are 7,05895 units in the year 2018 as compared to 6,05477 units in 2017. Thus, there is an increase of 16.58% over previous year. However if overall percentage of houses available against total Police strength is taken into account, it means that Government has not been able to provide housing to 13, 61,105-lakh Police persons. In terms of percentage, only 34.15% of Policemen have been provided housing facility. The housing satisfaction index is low and the quality/maintenance of housing for Policemen is poor. Generally state of Police accommodation is dilapidated.
- (v) In civil especially in Metros he lives in very poor and pathetic accommodation,

which hurts his self-esteem and ultimately behaviour and attitude.

Police Training -is it in Sync with Modern Societal needs?

12. Initial phase of COVID-19 lockdown saw images of Police beating and humiliating public. Every now and then, there are images of Police brutality. The Police performance in LWE and counter insurgency has not been very encouraging. All this is an indication that Police training is not coordinated with modern day requirements. There is a need to carry out modifications to Police training as per societal and ground specific needs. Each state should have a working group consisting of Police officers of all ranks to continuously study training needs and incorporate them in training curriculum. In Police, posting to a training institution is considered as punishment and kind of demotion. Those posted to training institutions consider it as a punishment and an impression is there that those not in good books of government, to be sidelined are posted to training institutions at state level. It speaks for importance of training at state level. How important Police training is for government can be gauged from the expenditure being incurred on Police training. The data on Police organisations as on 01 Jan, 2019 compiled by BPR&D is an eye opener on the state of Police training which is reflected in Police

response and behaviour during riots and difficult law and order duties and response to situations in LWE-

- (a) Sanctioned strength of Police in 2018-25.95 lakh.
- (b) Expenditure on Police training 2018-19- Rs 1,675.50 cr.
- (c) Yearly training expenditure per person- Rs 1548.79/-
- (d) Yearly expenditure on state Police forces 2018-19- Rs 1, 33,324.94 cr.
- (e) Percentage expenditure on training of total expenditure is 1.25% which is highly inadequate.

13. Based upon data compiled by BPR&D certain deficiencies emerge which in the overall scenario affects the professionalism of Policeman, his behaviour, his relations with society and affect him and his family at personal level and ultimately image of government and Police as organisation at professional level. The deficiencies are as under:-

- (a) Deficiencies/Vacancies- As per data as on 01 Jan 2019, the overall deficiency of Policemen at all India level is 5.28 lakh. With heavy deficiency, there is an increase in population to guard/ increased area to be covered. More time needed for policing and more physical and mental effort needed. Situation gets compounded during riots, in LWE

environment, elections/political rallies, religious congregations which results in exhaustion, fatigue, sleep deprivation, less time to spend with family which further results in stress.

(b) Training Shortcomings- With an amount of Rs 1548.79/- being spent on training per person, the quality of training is compromised and what comes out of Police training school is not fully baked stuff but a half /semi baked stuff, which spoils health of society due to unprofessional learning. Also during training in some Police training schools, only two meals are provided for recruits. As per available information at the Police Academy Madhuban recruits are being served breakfast at 0900 hrs and dinner at 1830 hrs. A number of recruits have fallen unconscious. How do you expect professional dedication from recruits as well as instructors? The result is semi-professional/ unprofessional stuff out of Police schools.

(c) Is Policetrainingground/geographical area specific-Police are a state subject. Each state has its physical, cultural, geographical attributes as also the law and order difficulties are different. Is Police training as per needs of state? Some states need more emphasis on human rights and courteous behaviour than other states. Need introspection otherwise, stuff which

will come into public domain will be unprofessional.

14. Detailed analysis of data point out following

(a) Large-scale vacancies at constabulary and Non Gazetted level- Overworked Policeman-Need for increase in authorisation of strength and Police stations.

(b) Need for reforms in recruitment.

(c) Need for better, qualitative and sufficient housing infrastructure/ facilities.

(d) Infrastructure at Police stations poor-Need for improvement of infrastructure within Police stations

(e) Inadequate expenditure on training- Poor quality training-Need for removal of shortcomings in Police Training.

(f) Lowly paid Policemen- Inability to meet material needs – corruption- Need for increase in salaries.

(g) Non meeting of lower order needs- stress

(h) Non meeting of higher order needs – More stress

15. These deficiencies /shortcomings in the overall scenario affect Policeman professionally, his behaviour, his relations with family, society and image of government and Police as organisation.

How they affect the Police constable as individual and functioning of group is amply depicted in Police response during riots and on roads in their conduct with public. The effects of shortcomings / deficiencies on Individual Policeman, behaviour of Police at the cutting edge of Police organisation are devastating and lead to stress, more stress, irritation, irrational behaviour and violent traits and health hazards.

Types of Stress

16. As per John W Newstrom in his book "Organizational Behaviour" "Human Behaviour at work" 12th edition Chapter 15, Stress has been defined as general term applied to pressures people feel in life. "When pressure begins to build up, it can cause adverse strain on persons emotions, thought processes, behaviour and physical condition. When stress becomes excessive, employees develop various symptoms of stress that can harm their job performance and health and threaten their ability to cope with the environment".

The typical negative symptoms of unmanaged stress as per John W Newstrom are physiological, psychological and behavioural which have following effects one by one.

Physiological

- (a) Headache
- (b) Ulcers
- (c) Digestive problems
- (d) High blood Pressure
- (e) Sleep disruption

Psychological

- (a) Emotional Instability
- (b) Emotional Instability.
- (c) Nervousness and Tension.
- (d) Chronic Worry.
- (e) Depression
- (f) Burnout

Behavioural

- (a) Excessive Smoking.
- (b) Abuse of Alcohol or Drugs.
- (c) Absenteeism.
- (d) Aggression.
- (e) Safety Problems.
- (f) Performance problems

17. Need of the hour is to accept that our Police personnel suffer from stress related symptoms. If they suffer from these symptoms, it affects them physically, mentally and behaviourally and in the ultimate analysis their health, family life and work performance. All this is reflected in their behaviour on duty and off duty and many times this stress also leads to suicides and fratricides. Have any survey been carried out on these aspects or not. if not there is a need to carry out survey on Police personnel health and behaviour issues on urgent basis and BPR& D NEED TO INITIATE IT AS PRIORITY.

Steps Needed to Improve Police behaviour and Police Image

18. Stress and behavioural aberrations are reflected in everyday behaviour of Police with public. It is reflected in failure to effectively Police the society to control law and order. The surveys on corruption index rate Police very high in corrupt practices, which is again an institutional behavioural aberration of organisation. Institutional activism is needed for carrying out state wise surveys for going into stress and behavioural aberrations of Police. Till the time institutional mechanism is placed, following short and long term measures are suggested for improving Police behaviour and image and also making Police community friendly:-

- (a) Fill up vacancies on priority to make for large deficiencies in manpower. It will help in reducing work hours to some extent
- (b) Manpower involved in non-essential duties be restored back to Police stations.
- (c) Improve housing satisfaction index of Police constables and non-gazetted staff. Until better housing infrastructure is established, allow hiring /rent facilities at place of choice anywhere within state.
- (d) Establish proper canteen facilities for Police personnel and families at subdivision level. It improves satisfaction level and self-esteem.
- (e) Reward honest Police personnel and institute honesty awards based upon performance.
- (f) Decentralise grant of leave to station house officers, sub divisional Police officers, do not deny entitled leave.
- (g) Establish Police MI room in every subdivision for looking after medical needs of Policemen.
- (h) Improve working conditions.
- (i) Improve promotional avenues
- (j) Better pay scales- do not treat them on par with an eight-hour a day schedule job.
- (k) The training standards be made more rigorous to make Policemen physically and mentally strong.
- (l) Improve training infrastructure.
- (m) Introduce in service courses. Make every Policeman including officers of all ranks up to SP level to go through in-service courses at state level.
- (n) Introduce all rank courses for better harmony and understanding.
- (o) Fix tenure for VIP duties and do not allow anyone to be with VIPs beyond that tenure.
- (p) Fix Thana tenure and rotation be done after the tenure is over.
- (q) Introduce system of interview at Thana

and district level. Ensure every Police person is interviewed by SHO, DSP and SP at regular intervals. The SHO once every month, DSP for two months and SP every quarter and interview be recorded

- (r) Introduce psychological counselling sessions for Policemen to know their problems.
- (s) Introduce system of annual medical examination for Police personnel including officers.
- (t) Reduce work hours to reduce fatigue and provide more time with family.
- (u) Ensure every Police person celebrates festival with his family in rotation.
- (v) Improve communication and mobility at Thana level. The Thana staff should have

a feeling of pride in their thana, which will only come if thana is well equipped in terms of facilities.

- (w) Deal firmly with corrupt and zero tolerance towards corruption.

19. The job of Police is difficult and Police constable is on duty 24X7X 365. An effort is needed to improve his service conditions and working environment. A comfortable and healthy working environment will improve satisfaction index of Police constable and thana. Improved satisfaction index implies better happiness and wellness quotient. It will help reduce stress and establish better behaviour by man on beat duty and better relations with citizens, improved law and order state and a better image of Police in public eye.

Non-Invasive / Minimal Invasive Autopsy in Medicolegal Cases: A Need of the Hour and Future



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Dr. Abhishek Yadav¹

Dr. Sudhir K Gupta²

Dr. Abilash S³

Dr. Varun Chandran⁴

Abstract

Conventional post-mortem examination comprises opening up of all three body cavities as a routine practice in cases of medicolegal deaths. This causes immense mental anguish among relatives of deceased who don't wish the bodies of their loved ones to be mutilated. In India, the regulating law CrPC doesn't describe the exact methodology to be adopted for Medico-legal autopsy and it's been a traditional practice for a long time to conduct complete internal dissection instead of assessing the need from case to case basis. COVID-19 pandemic has put forward a difficult situation in Medicolegal Autopsy where use of the routine traditional autopsy practice even with highest precautions would increase the risk of spread of infection to Autopsy Surgeons, Mortuary technicians, Mortuary staff, Police personnel. Non-invasive/ Minimal invasive autopsy is the need at this crisis time. Statistical Analysis of data of the cases done at Department of Forensic Medicine, AIIMS New Delhi during the lockdown period which included a total of 558 cases (450 Males and 108 Females) showed that Non-invasive/ Minimal invasive autopsy is sufficient to arrive at the cause of death. These techniques are on only the need of the hour in current Pandemic and but may also be used in future to promote Humanitarian Forensics.

Key words: Non-invasive autopsy, Minimal invasive autopsy, Virtual autopsy, COVID-19, Medicolegal Autopsy.

Author's Intro:

- 1 Associate Professor, Department of Forensic Medicine and Toxicology, All India Institute of Medical sciences (AIIMS), New Delhi
- 2 Professor and Head, Department of Forensic Medicine and Toxicology, All India Institute of Medical sciences (AIIMS), New Delhi
- 3 Senior Resident, Department of Forensic Medicine and Toxicology, All India Institute of Medical sciences (AIIMS), New Delhi
- 4 Assistant Professor, Department of Forensic Medicine and Toxicology, All India Institute of Medical sciences (AIIMS), New Delhi

Introduction

Autopsy or Postmortem examination is a time-tested method of investigation of the cause of death in Medicolegal cases.¹ Conventional post-mortem examination comprises opening up of all three body cavities i.e. head, chest and abdomen, removal of all organs by various dissection techniques and dissection of organ systems and individual organs by using surgical instruments like scalpels, forceps, scissors etc. Opening up of different body cavities, as routinely practiced in case of medico-legal deaths creates immense mental anguish among relatives of deceased who don't wish the bodies of their loved ones to be mutilated. Most of the dissection techniques followed in conventional medico-legal autopsies have been in practice since the early 20th century or even before. In India, Criminal Procedure Code, the regulating law, doesn't describe the exact methodology to be adopted for Medico-legal autopsy. As a conventional practice, Forensic Autopsy Surgeons of the country have been using a complete dissection technique in medicolegal autopsies irrespective of the need of the case or emotional trauma to the kin of deceased. In 2020, the whole world fell into COVID-19 pandemic crisis due to the spread of SARS CoV 2. COVID-19 pandemic times has also put forward a difficult situation in Medicolegal Autopsy where use of the routine traditional autopsy practice would increase the risk of spread of infection to the Autopsy Surgeons, Mortuary technicians, Mortuary staff, Police personnel and even family members due to coming in direct contact with infected organs, fluids and secretions, even after taking the

highest precautions.² Unprecedented and challenging problems require innovative and need based solutions. So shifting to Non-invasive/ Minimal invasive autopsy is not only the need of current times but is also the requirement for the future to prevent unnecessary dissection or mutilation of the body for Humanitarian Forensics.

Background

Department of Forensic Medicine, All India Institute of Medical Sciences, AIIMS, New Delhi experienced an unprecedented situation from March 2020 due to COVID-19 Pandemic. Many cases with history of severe respiratory tract infection were 'brought dead to the hospital' and labelled as MLC cases thus warranting an Autopsy. The conventional autopsy techniques including dissection of head, chest and abdominal cavities have the risk of generating aerosols and unfortunately SARS CoV2 had already been proven to be capable of transmission by this means. Lung dissection, airway dissection, dissection or manipulation of GIT etc. also proved to be dangerous in terms of disease transmission of COVID-19 by different study groups. Asymptomatic infected people and patients in incubation period were also dying due to unnatural causes. No reliable clinical/ epidemiological history was available with unidentified dead bodies. Cases with negative swab results could also have been suspected COVID-19 deaths as false negative result is not uncommon.

Considering the potential infectivity during

Autopsy procedure, to protect doctors and other staffs and as a measure of containing the spread of infection, Non-invasive/ Minimal invasive approach for Medicolegal Autopsy was adopted.

Non-Invasive / Minimal Invasive Technique For Post Mortem Examination

The concept of “Minimally invasive autopsy” was first reported in the modern medical literature by Avrahami et al in Israel.^{3,4} They performed the post-mortem examination with the objective of minimally invasive autopsy which gives the relevant outcome of autopsy without the need for the conventional autopsy, which is perceived by the family to be a ‘disfiguring’ procedure. Integrating the traditional autopsy with the latest imaging methods for the purpose of non-invasive documentation has made this concept scientifically reliable and credible. Department of Forensic Medicine formulated a methodology for conducting Postmortem examination in Non/Minimal invasive manner which could meet all the practical and legal needs of a Medico-legal autopsy.

1. Document Verification:

The inquest papers produced by the IO should be perused in detail analysing each minor possibilities. These papers include a Postmortem Request form, an inquest summary, signed statements of two witnesses/relatives, previous treatment records, FIR/DD Entry, MLC, death summary etc. For this purpose, a format for declaration to be filled by the IO, designed by the Department, in which

the IO has to declare his investigation regarding the circumstances of the case and the possibility of foul play related to the death. The doctor who receives the inquest papers then interacts with the relatives for verification of all these facts and to further clarify the doubts, if any. A special room with good ventilation and all possible precautions of social distancing was designated for this entire procedure to prevent spread of infection. If the history given by the relatives and Police, facts in the supportive documents are both consistent with each other and confirm absence of involvement of any possible criminal element/ foul play, the case is to be taken for non-invasive/ minimal invasive autopsy examination. In case of hospital treated cases with registered offences like RTAs, injuries by machineries etc. where proper treatment records with cause of death already furnished by the treating doctor, were available; similar non-invasive or minimal invasive post-mortem examination was to be adopted.

2. Digital Imaging:

In needed cases, X-ray examination of the body is to be carried out at the Forensic Radiology Division of the Department under strict post procedure disinfection protocol.

Example of Cases taken for radiological evaluation;

- a. Brought dead cases with history of Road Traffic Accident.

- b. Brought dead cases with history of blunt trauma or any fall.
- c. Brought dead cases with history of gunshot.
- d. If the assigned autopsy surgeon feels the necessity.

A preview of imaging in such cases plays an important role in deciding on non-invasive post-mortem examination.

3. External Examination:

A thorough external examination of dead body is conducted, including examination of clothing. During this procedure the autopsy surgeon checks details of all the possible post-mortem findings over the body i.e. systematic external examination from head to toe. This includes a detailed examination of eyes (corneas, conjunctivas, pupils), nose (nostrils, septum, alar and adjacent cheeks), mouth (lips including mucosa, frenulum, teeth, gums and tongue), ears (pinna of ears and external auditory meatus), finger and toe nail bed discolouration, external genitalia, all other natural orifices in special along with whole body profile including conventional assessment of rigor mortis, livor mortis etc. Any abnormal discoloration like icterus/pallor/pigmentation, any deformity or disfiguration which was fresh (was corroborated with X-ray); signs of ascites/effusion/oedema etc. should be recorded and documented with care and precision.

All the external injuries should be

recorded in a similar manner just like in a normal autopsy procedure.

4. Photographic Documentation:

Full coverage of all the four profiles of the body in single frames should be taken as distant shots including front and side profiles of the face, each eye along with inner aspect of lids, nostrils and adjacent areas, lips including mucosa, teeth and gums. Clear pictures of external appearance of neck, trunk, limbs and genitalia should be obtained in every case. Pictures of all injuries and suspicious lesions should be separately obtained along with an appropriate scale. All the photographs obtained to be retained as departmental records.

5. Specimen Collection:

The following samples can be taken for toxicological analysis, if needed, instead of complete viscera.

- a. Minimum of 30ml of blood taken by femoral approach to be preserved in Sodium Fluoride.
- b. Minimum of 30 ml of urine taken by suprapubic approach to be preserved in Sodium Fluoride.
- c. Vitreous humor in special occasions.

Though histopathological samples are not being taken, certain body fluids can be sent for cytological/viral/microbiological examination as per the merit of the case.

- a. Ascitic fluid by tapping.
- b. Pleural fluid by tapping.
- c. Spinal fluid by tapping.
- d. Naso-Pharyngeal swabs (COVID 19 suspected cases)

Minimally invasive autopsy (MIA) with tissue biopsy technique is an important procedure which also upholds the integrity of the cadaver and avoids invasive procedures. This tissue biopsy can be performed either image guided or grossly just as needle biopsy of organs depends on the need of the case as determined by the Autopsy surgeons in order to study and evaluate them and to finally conclude on the cause of death. This technique of tissue biopsy guided autopsy technique dates around 65 years back when Terry demonstrated the procedure with his study which showed a success rate of 92% in comparison with the conventional autopsy procedure. The procedure has many benefits which include maintaining the integrity of the cadaver and avoiding invasive procedures which is the major concern of relatives, less duration needed for sampling and also for the entire autopsy, minimal instruments required and hence the cost of the autopsy as well.^{5,6}

If the DNA sample of the decedent has been requested by the Police, dried blood in gauze can be collected by multiple prick method. Similarly, vaginal swabs, finger nail clippings, hand swabs etc. can be obtained as usual protocol.

6. Cause and Manner of Death

The cause of death may be concluded on the cumulative basis of external findings, treatment records, history, circumstantial evidence and radiological examination. The doctor may reserve his opinion regarding cause or manner of death if he wants more clarification regarding the circumstances of the case. In this situation, he has to request formally for the investigation report/ scene of crime photographs etc. from the IO. After perusal of these investigative findings, obtaining the chemical examination report he can formulate his final opinion as to the cause of death.

Innovations

Doctors of Department have designed an Autopsy hood which is made up of transparent material which is durable and can withstand common methods of disinfection and sterilisation. The hood can decrease the possibility of aerosol transmission during dissection techniques in cases where detailed dissection needs to be conducted.



Statistical Analysis

A statistical analysis was done of Medicolegal Autopsy cases conducted at the Department of Forensic Medicine & Toxicology, AIIMS New Delhi during the Lockdown period (third week of March 2020 to the end of July 2020) of COVID-19 pandemic conducted by Non/Minimal Invasive Approach. A total of 558 cases were conducted out of which male postmortem cases were 450 and female postmortem cases were 108 (**Figure-1**). Most common cause of death was found to be hanging (28.6%) followed by natural deaths (23.6%) and head injury (12.9%). In around 54 cases (9.6%) of death the final cause of death was kept pending till the availability of the FSL reports or other documents related to case.

Analysis of the cases conducted during the lockdown of COVID-19 pandemic showed that in about 90.4% cases Non/Minimal Invasive autopsy procedure alone was sufficient to conclude the cause of death. Even in remaining 9.6% cases the cause of death could also be concluded based on the autopsy findings, hospital records and circumstantial evidence, but was kept pending for want of additional investigations/requirements before the final conclusion on the cause of death.

Figure-1: Sex Distribution of cases

Figure-2: Distribution of Cause of Death

Discussion

Complete conventional autopsy is a less preferred technique by the relatives of the deceased particularly in cases where no foul

play is involved and the autopsy is being conducted only because of the cause and manner of death which are unnatural like in road traffic accident cases. Due to invasive nature of conventional autopsy, opening of the dead body after death is considered as mutilation by the relatives, because of emotional and religious reasons.⁷ In such a scenario, minimal or non-invasive approach to perform the autopsy will respect the sentiments of the relatives. Using modern day imaging modalities like CT and MRI to diagnose the cause of death will make the autopsy procedure totally non-invasive or scalpel free. Terry demonstrated the procedure with his study which showed a success rate of 92% in comparison with the conventional autopsy procedure. The procedure has many benefits which include maintaining the integrity of the cadaver and avoiding invasive procedures which is the major concern of relatives.^{5,6} Using minimal invasive procedures like biopsy coupled with imaging guidance has scientific acceptability and credibility.

Bolliger's study on cases a combination of CT, postmortem CT angiography and biopsy, which represented a minimally invasive approach, gave correct diagnosis of the cause of death in 18 (90%) of 20 cases. In remaining one case, it detected a myocardial infarction which had to be confirmed histologically. He concluded that Minimal Invasive autopsy can be a suitable replacement for conventional autopsy when the doctor takes a rational decision on case to case basis.⁸

In COVID-19 confirmed or suspected cases

where death occurs due to any unnatural causes like RTA, poisoning, assault, burns, drowning, etc. if the cases are treated then their hospital case records including lab reports, report of diagnostic or imaging studies, treatment given etc. will provide an additional documentary background for correlating with the investigation and to reach a reasonable conclusion about the cause of death. In cases where injuries are present, the pattern and age of injuries can be determined mostly by external examination itself. Postmortem X ray examination will be an additional supportive tool. If the merit of the case warrants then further exploration of injuries may be done strictly following the precautionary measures.²

During Postmortem examination, Postmortem Interval (PI) or Time since Death (TSD) estimation is mostly done on the basis of multiple external post-mortem changes along with circumstantial evidence like hospital records, time of last seen alive, CCTV footages and statement of eye witnesses after confirming their reliability. These procedures will be the same under the purview of the Non/ Minimal Invasive autopsy procedures as well.

Department of Forensic Medicine, AIIMS New Delhi has been working on the concept of Humanitarian Forensics and a new non-scalpel model of Medico-legal Autopsy in India “the Virtual Autopsy” by using a postmortem CT Scan. Installation of the same has been nearly completed in the department and will soon be used for practical applications.⁹ Virtual autopsy concept is based on utilization of postmortem cross-sectional imaging like

Computed Tomography to evaluate the internal findings in a dead body to avoid unnecessary dissections.¹⁰

Conclusion

Non-invasive/ Minimally invasive autopsy is a scientific, acceptable and credible technique for conclusion of cause of death for Medicolegal purposes. Non-invasive/ Minimally invasive autopsy is also more acceptable to the relatives or legally acceptable representatives for the apprehension of mutilation of body. Involving the technically advanced Radiological techniques like Digital X-ray and CT scan will further add to the credibility of the Autopsy procedure. Non-invasive / Minimal invasive autopsy balances the demand of justice delivery system and emotional aspects of the kin. This is proving beneficial not only in COVID-19 pandemic but will be an important tool in future to prevent unnecessary dissection of dead bodies.

Conflict of Interests: None

Funding: None Required

References

1. Burton J, Ruddy G. The hospital autopsy—a manual of fundamental autopsy practice. 3 edn. London: Hodder Arnold, 2010.
2. Indian Council of Medical Research. Standard Guidelines for Medico-Legal Autopsy in COVID-19 Deaths in India. 1st ed. New Delhi: ICMR; 2020.
3. Avrahami R, Watemberg S, Hiss Y et al. Laparoscopic vs conventional autopsy. A promising perspective. Arch Surg 1995;

- 130:407-409.
4. Avrahami R, Watemberg S, Hiss Y. Thoracoscopy vs conventional autopsy of the thorax. A promising perspective. *Arch Surg* 1995; 130:956-958.
 5. Terry R. Needle necropsy. *J Clin Pathol.*1955;8:38-41.
 6. Das A, Chowdhury R. Searching cause of death through different autopsy methods: a new initiative. *Journal of Family Medicine and Primary Care.* 2017 Apr;6(2):191.
 7. Lewis C, Latif Z, Hill M, Riddington M, Lakhanpaul M, Arthurs OJ, Hutchinson JC, Chitty LS, Sebire NJ. "We might get a lot more families who will agree": Muslim and Jewish perspectives on less invasive perinatal and paediatric autopsy. *PLoS one.* 2018 Aug 9;13(8):e0202023.
 8. Bolliger SA, Filograna L, Spendlove D, Thali MJ, Dirnhofer S, Ross S. Postmortem imaging-guided biopsy as an adjuvant to minimally invasive autopsy with CT and postmortem angiography: a feasibility study. *American journal of roentgenology.* 2010 Nov;195(5):1051-6.
 9. AIIMS, ICMR working on virtual autopsy technique: Govt in Rajya Sabha. Available from: <https://indianexpress.com/article/india/aiims-icmr-working-on-virtual-autopsy-technique-govt-in-rajya-sabha-6149340/>
 10. Ukpo O, Boger D. The Role of Virtual Autopsy and Use of a CT Scanner in Medico-Legal Death Investigations. In *Multidisciplinary Medico-Legal Death Investigation.* Academic Press.2018. 69-73.

An Empirical Investigation on Identification of Various Factors Affecting Crime against Women in Chhattisgarh, India



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Ashok Juneja*

Abstract

Women in India have always been issues of concern. The folks and society at large consider women as second class citizens. Though we admire and worship her in the name of Durga, Saraswati, Parvati and Kali, we also abuse them in the form of Child-marriage, Female infanticide, Sati, Sexual harassment, Dowry and so on. Hence there is a need to develop awareness and improve laws to reduce these crimes against women. Thus to understand better the awareness levels and status of mindset of people regarding crime against women this study is done. The scope of the study is limited to Domestic crime against Indian women. The study is confined mainly to state of CHHATTISGARH for data collection and study.

KEYWORDS: Crime, violence, legal provisions, data analysis, hypothesis, research

INTRODUCTION

Crime against women is a Global phenomenon. Violence against women has long been a problem. In spite of all the development, women are still victims of horrendous crimes across the world. This violence ranges from very mild teasing to rape and murder, and takes place at home, in the streets, at work places, in short everywhere. Few crimes against women are reported, fewer still prosecuted, and a

negligent number of accused are actually punished. In the absence of detailed studies on incidence, it is difficult to come up with suggestions about reducing if not abolishing such violence. There is an urgent need for more studies on this violence so that the psychology of the violators is better understood. Instances of violence need to be thoroughly investigated, and ways and means devised to reduce their incidence. There is a need for quick and severe punishment for the accused, which would

Author's Intro:

* Special DGP (SIB-ANO), Chhattisgarh

act as a deterrent too.

Every woman is entitled to a fear free and respectable life and it's our responsibility to create such a society where a woman is able to live with dignity and respect. It is not only a human right but it's a Nation building activity at the grassroots level. Just framing and enforcing laws to protect women are not enough. What is required is a social and economic freedom to women to resist such acts and build a society where men respect women.

The official statistics showed an improvement in health status, literacy rate, work participation rate and political participation among women, while on the other hand the spread of social evils like dowry deaths, child marriage, domestic violence, rape, sexual harassment, exploitation of women workers are rampant in different parts of India. Humiliation, rape, kidnapping, molestation, dowry death, torture, wife-beating etc. have grown up over the years.

SELECTION OF RESEARCH TOPIC & ITS IMPORTANCE

Social development happens when right investment is made in people. A developed society has less or minimal income discrimination with absolutely no class or gender discrimination, where every individual feels safe and experiences a worthwhile contribution towards society.

Violence against women is violation of

human rights. This is the biggest hindrance to achieving gender equality. It's a crime that leads to physical and psychological harm to the woman.

It can be a major hindrance for any society to achieving equality, development and peace. Such acts of crime are direct consequences of gender inequality, unequal social power structures, illogical cultural practices based on blind beliefs and traditions, religious beliefs, customs and media to a large extent.

THE OBJECTIVE OF THIS STUDY:

1. To determine the various factors affecting Crime against women.
2. To determine Area of the respondents is associated with the antecedents of crime against women.
3. To determine Marital Status of the respondents is associated with the antecedents of crime against women.
4. To determine Family Status of the respondents is associated with the antecedents of crime against women.
5. To determine Gender of the respondents is associated with the antecedents of crime against women.
6. To determine Education of the respondents is associated with the antecedents of crime against women.
7. To determine Age of the respondents is associated with the antecedents of crime

against women.

8. To determine Employment status of the respondents is associated with the antecedents of crime against women.

REVIEW OF LITERATURE

INTRODUCTION

Researches in India and as well as abroad are studied carefully. The methodology adopted by researchers and their findings have been carefully analyzed. Proper tips from these studies help to shape present research work in a proper direction.

MEANING OF CRIME / VIOLENCE AGAINST WOMEN

The Semantic meaning of "crime against women" is direct or indirect physical or mental cruelty to women. Crimes which are "directed specifically against women" and in which only women are victims are characterized as Crime Against Women. It is equally important to clarify the concept of "Violence" against women. Violence includes abuse and any sort of physical aggression or misbehavior. When violence is committed at home it becomes domestic violence and involves family members such as children, spouse, parents or servants. Domestic violence may involve different means such as hitting, kicking, biting, shoving, and restraining, throwing objects. In broad terms, it includes threats, sexual abuse, emotional abuse, controlling or domineering, intimidation, stalking, passive/

covert abuse and economic deprivation, rape, abduction, kidnapping, murder (all cases of criminal violence, dowry death, wife battering, sexual abuse, maltreatment of a widow and an elderly woman (all cases of domestic violence) and eve-teasing, forcing wife/daughter-in-law to go for feticide, forcing a young widow to commit sati etc. (all cases of social violence), are issues which affect a large section of society.

The United Nations defined "Violence against Women" in 1993 in Declaration on the elimination of Violence against Women. It defines it as any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life.

WOMEN IN INDIA

The status of women in India has been subject to many great changes over the past few decades. In ancient India, early Vedic period, the women enjoyed equal status with men in all fields of life. Later 500 B.C, the status of women began to decline. The women enjoyed freedom, status and prestige in the society but did not last long and women finally settled down to an indoor life. The Indian woman's position in society further deteriorated during the medieval period when sati among some communities, child marriages and a ban on

widow remarriages became part of social life among some communities in India.

Mahatma Gandhi re-asserted women equality with men. In response to the call of Gandhi women discarded their veil and came out of the four walls of their houses to fight the battle of freedom shoulder to shoulder with their brothers. The result is that the Indian Constitution today has given women the equal status with men.

WOMEN IN MODERN SOCIETY

Women's participation in the workforce as well as in other activities increased during the 19th and from the early period of 20th century due to the uplift of women started by the influence of social reforms. As far as India is concerned, the social structure, cultural norms and value systems are important determinants of women's role and their position in society. India has one of the most impressive sets of laws for women. The state is to practice protective discrimination in favour of women.

CRIME AGAINST WOMEN IN INDIA

The numbers of violent crimes in India especially those against women including rape that are reported in official statistics are increasing with each passing year. It is estimated that the growth rate of crime against women would be higher than the population growth rate by 2010, which implies that progressively a greater number of women are becoming victims

of violence. Throughout history women in various continents of the world have been considered as the physically weaker sex. The gender differences and bias existing globally place women all over the world in various disadvantageous positions. Crimes against women are assertion of dominance over them and come from the baser instincts of society. As a matter of fact the problem of violence against women is not something new. Moreover violence against women is often not considered as violence because of general acceptance of man's superiority in the society. Women themselves also do not consider it as violence because of their misconstrued religious values and resulting socio cultural attitudes.

Gender violence is a common problem prevailing in almost all the developing countries. Even in India the issue continues unabated creating many hassles and challenges for the social growth. The age old cultural beliefs and tradition have identified various issues of gender – based violence that over the period of time has become a major cause of harassment faced by the women.

In India where almost half of the population are women, there are instances where they have been ill-treated and deprived of their right to life and personal liberty as provided under the constitution of India. Women are always considered as physically and emotionally weaker than the males, whereas

at present women have proved themselves in almost every field of life affirming that they are no less than men due to their hard work whether at home or working places. Behind closed doors of homes all across our country, people are being tortured, beaten and killed. It is happening in rural areas, towns, cities and in metropolitans as well. It is crossing all social classes, genders, racial lines and age groups. It is becoming a legacy being passed on from one generation to another. But offences against women which reflect the pathetic reality that women are just not safe and secure anywhere. According to a latest report prepared by India's **National Crime Records Bureau (NCRB)**, a crime has been recorded against women in every three minutes in India. Every 60 minutes, two women are raped in this country. Every six hours, a young married woman is found beaten to death, burnt or driven to suicide.

Violence against women is not a new phenomenon. Women have to bear the brunt of the domestic, public, physical as well as emotional and mental violence against them, which affects her status in the society to a larger extent. The statistics of increasing crimes against women is shocking, where women are subjected to violent attacks i.e. foeticide, infanticide, medical neglect, child marriages, bride burning, sexual abuse of girl child, forced marriages, rapes, prostitution, sexual harassment at home as well as work

places etc. In all the above cases, a woman is considered as an aggrieved person.

As women gain influence and consciousness, they will make stronger claims to their entitlements - gaining further training, better access to credit and higher incomes - and command attention of Police and courts when attacked. As women's economic power grows, it will be easier to overcome the tradition of "son preference" and thus put an end to the evil of dowry.

Violence against women can fit into several broad categories. These include violence carried out by individuals as well as states. Some of the forms of violence perpetrated by individuals are coercive use of contraceptives; female infanticide; prenatal sex selection; obstetric violence and mob violence; as well as harmful customary or traditional practices such as honor killings, dowry violence, female genital mutilation, marriage by abduction and forced marriage.

FORMS OF VIOLENCE EXPERIENCED BY WOMEN THROUGHOUT THEIR LIFESPAN

The World Health Organization (WHO), in its research on Violence against women, categorized it as occurring through five stages of the life cycle: 1) pre-birth 2) infancy 3) Girlhood, 4) adolescence and adulthood 5) elderly

PHASE	TYPES OF VIOLENCE PRESENT
Pre-birth	Sex-selective abortion; battering during pregnancy; coerced pregnancy.
Infancy	Female infanticide; emotional and physical abuse; differential access to food and medical care.
Girlhood	Child marriage; genital mutilation; sexual abuse by family members and strangers; differential access to food, medical care and education.
Adolescence	Violence during courtship; economically coerced sex (e.g. for school fees); sexual abuse in the workplace; rape; sexual harassment; arranged marriage; trafficking.
Reproductive Age	Physical, psychological and sexual abuse by intimate male partners and relatives; forced pregnancies by partner; sexual abuse in the workplace; sexual harassment; rape; abuse of widows, including property grabbing and sexual cleansing practices.
Elderly	Abuse of widows, including property grabbing; accusations of witchcraft; physical and psychological violence by younger family members; differential access to food and medical care.

Types and Forms of Violence against Women in India

(i) Sexual Harassment:

Half of the total number of crimes against women reported in 1990 related to molestation and harassment at the workplace. Eve teasing is a euphemism used for sexual harassment or molestation of women by men. Many activists blame the rising incidents of sexual harassment against women on the influence of "Western culture".

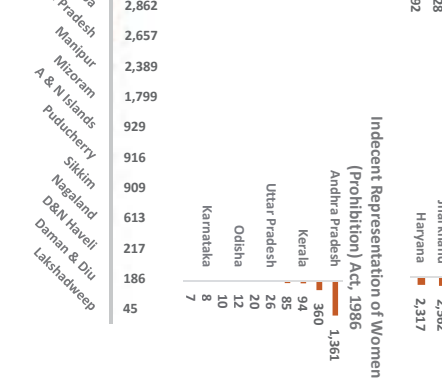
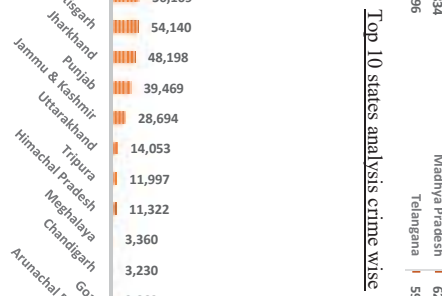
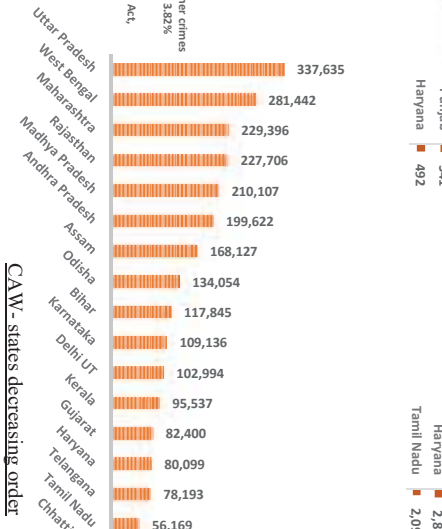
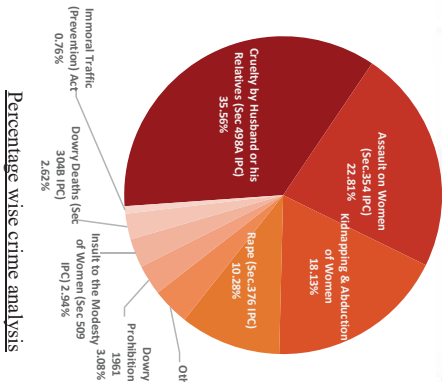
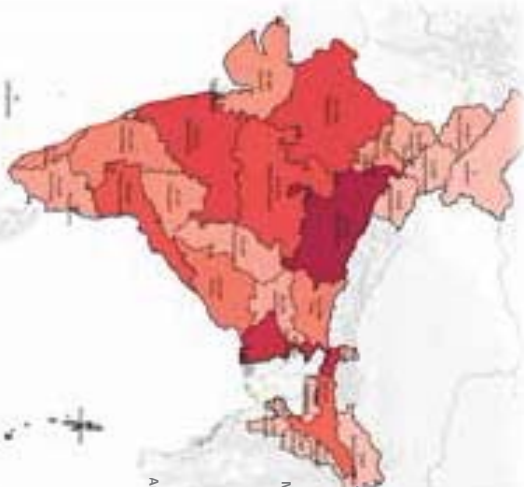
(ii) Dowry:

In 1961, the government of India passed the Dowry Prohibition Act, making the dowry demands in wedding arrangements illegal. However, many cases of dowry –related domestic violence, suicides and murders have been reported. The term for this is "bride burning" and it's criticized within India itself.

(iii) Child Marriage.

Child marriage has been traditionally prevalent in India and continues to this day. Historically, young girls would live with their parents till they reached puberty. In the past, the child widows were condemned to a life of great agony, shaving heads, living in isolation, and shunned by society. Although child marriage was outlawed in 1860, it is still a common practice.

CRIME AGAINST WOMEN IN INDIA (2010 – 2018)



Source: NCCB report, nccb.gov.in



(iv) Female Infanticides and Sex Selective Abortions: India has a highly masculine sex ratio, the chief reason being that many women die before reaching adulthood. It is therefore suggested by many experts, that the highly masculine sex ratio in India can be attributed to female infanticides and sex-selective abortions. The abuse of the dowry tradition has been one of the main reasons for sex-selective abortions and female infanticides in India.

Domestic Violence:

(v) The incidents of domestic violence are higher among the lower socio-economic classes. There are various instances of an inebriated husband beating up the wife often leading to severe injuries. Domestic violence is also seen in the form of physical abuse. Domestic violence includes, harassment, maltreatment, brutality or cruelty and even the threat of assault-intimidation. It includes physical injury, as well as "willfully or knowingly placing or attempting to place a spouse in fear of injury and compelling the spouse by force or threat to engage in any conduct or act, sexual or otherwise, from which the spouse has a right to abstain". Confining or detaining the spouse against one's will or damaging property are also considered as acts of violence.

Trafficking:

(vi) The Immoral Traffic (Prevention) Act was passed in 1956. However, many cases of trafficking of young girls and women have been reported. These women are

either forced into prostitution, domestic work, or child labour.

Eve-Teasing:

(vii) Eve teasing is an act of terror that violates a woman's body, space and self-respect. It is one of the many ways through which a woman is systematically made to feel inferior, weak and afraid. Whether it is an obscene word whispered into a woman's ear; offensive remarks on her appearance; an intrusive way of touching any part of a woman's body; a gesture which is perceived and intended to be vulgar; all these acts represent a violation of a woman's person, her bodily integrity.

Rape:

One-quarter of the reported rapes involve girls under the age of 16 but the vast majority are never reported. Although the penalty is severe, convictions are rare.

Crimes such as rape as a form of sexual violence are reported to be on the increase. Around the world, one in five women has been found to be victim of rape in her lifetime. Many rapes go unreported because of the stigma and trauma associated with them and the lack of sympathetic treatment from legal systems.

The insecurity outside the household is today the greatest obstacle in the path of women. Conscious that, compared to the atrocities outside the house, atrocities within the house are endurable, women not only continued to accept their

inferiority in the house and society, but even called it sweet.

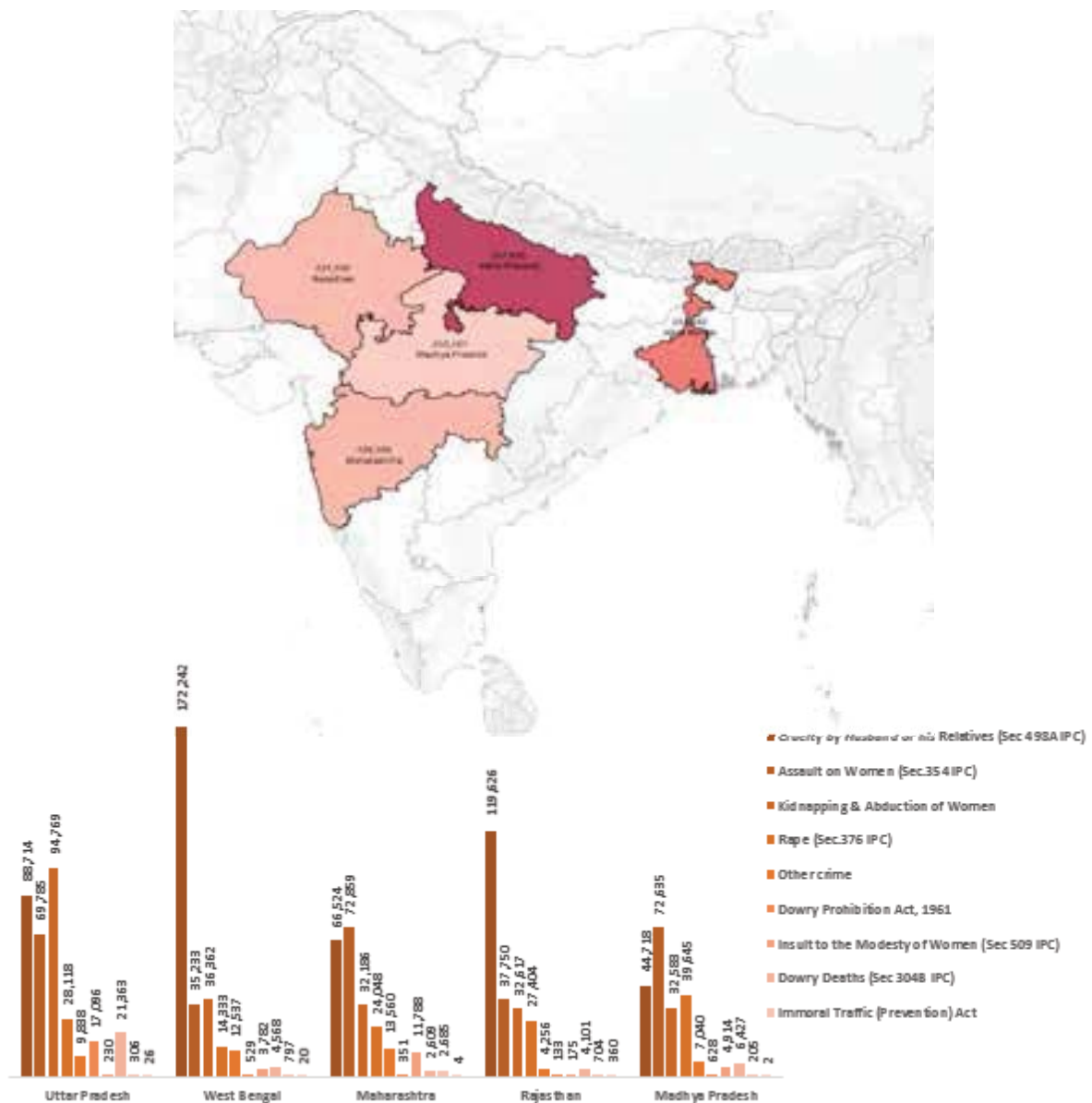
every 93 minutes a woman is burnt to death over dowry.

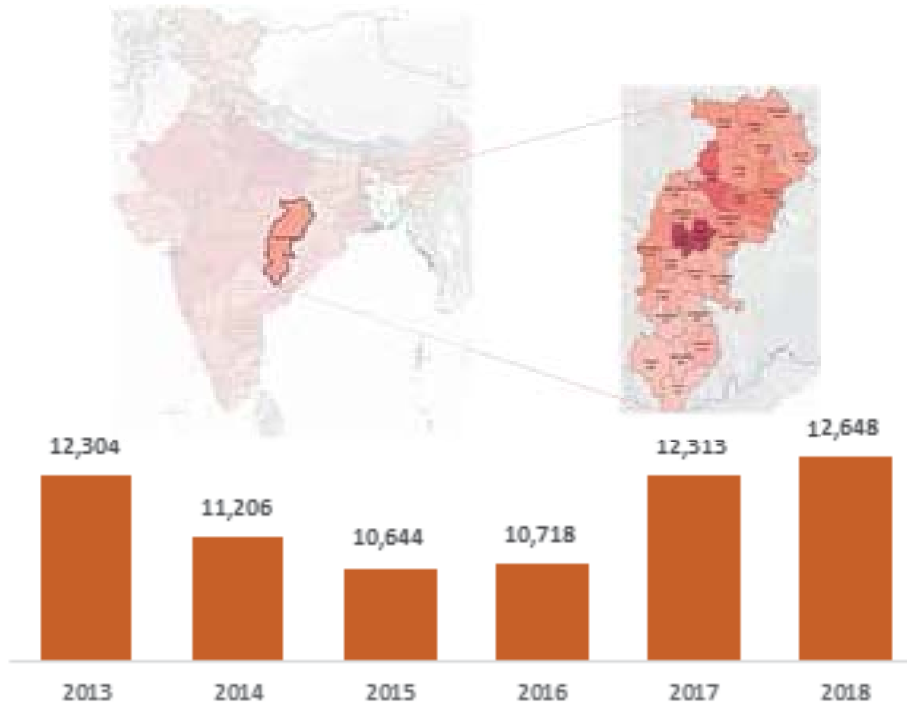
(viii) In recent years, there has been an alarming rise in atrocities against women in India. Every 26 minutes a woman is molested. Every 34 minutes a rape takes place. Every 42 minutes a sexual harassment incident occurs. Every 43 minutes a woman is kidnapped. And

Acid attacks:

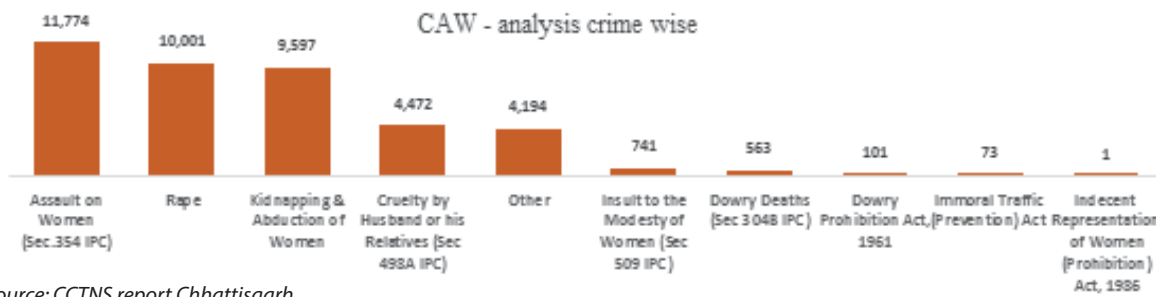
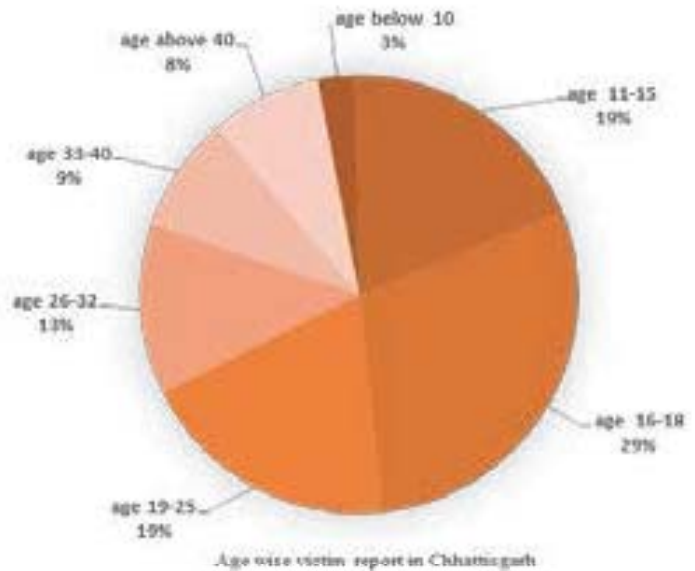
At times, acids such as sulphuric acid has been used to disfigure or kill women and girls for reasons such as family feuds, inability to meet dowry demands and for rejection of marriage proposals.

CAW – Top Five States in India





CAW reported during 2013 – 2018 in Chhattisgarh



Source: CCTNS report Chhattisgarh

Constitutional and Legal Provision For Women

The principle of gender equality is enshrined in the Indian Constitution in its Preamble, Fundamental Rights, Fundamental Duties and Directive Principles. The Constitution not only grants equality to women, but also empowers the State to adopt measures of positive discrimination in favour of women for neutralizing the cumulative socio economic, education and political disadvantages faced by them. Within the framework of a democratic polity, our laws, development policies, Plans and programmes have aimed at women's advancement in different spheres. India has also ratified various international conventions and human rights instruments committing to securing equal rights of women.

A) Constitutional Provisions for women are as under:

- Article 14, confers on men and women equal rights and opportunities in political, economic and social sphere.
- Article 15, prohibits, discrimination against any citizen on grounds of religion, race, caste, sex etc.
- Article 16, provides for equality of opportunities matters relating to employment or appointment to any office under the state.
- Article 39(a)(d), mentions policy security of state equality for both men and women the right to a means of livelihood and equal pay for equal work for both men and women.

- Article 42, directs the State to make provision for ensuring just and humane conditions of work and maternity relief.

B) Legal Provisions for women are as under:

- *Factories Act 1948*: Under this Act, a woman cannot be forced to work beyond 8 hours and prohibits employment of women except between 6 A.M. and 7P.M.
- *Maternity Benefit Act 1961*: A Woman is entitled to 12 weeks maternity leave with full wages.
- *The Dowry Prohibition Act, 1961*: Under the provisions of this Act demand of dowry either before marriage, during marriage and or after the marriage is an offence.
- *The Equal Remuneration Act of 1976*: This act provides equal wages for equal work: It provides for the payment of equal wages to both men and women workers for the same work or work of similar nature. It also prohibits discrimination against women in the matter of recruitment.
- *The Child Marriage Restrain Act of 1976*: This act raises the age for marriage of a girl to 18 years from 15 years and that of a boy to 21years.
- *Indian Penal Code*: Section 354 and 509 safeguard the interests of women.
- *The Medical Termination of Pregnancy Act of 1971*: The Act safeguards women

from unnecessary and compulsory abortions.

- Amendments to Criminal Law 1983, which provides for a punishment of 7 years in ordinary cases and 10 years for custodial rape cases.
- *73rd and 74th Constitutional Amendment Act* reserved 1/3rd seats in Panchayat and Urban Local Bodies for women.
- *The National Commission for Women Act, 1990*: The Commission was set up in January, 1992 to review the Constitutional and legal safeguards for women.
- *The Protection of Human Rights Act, 1993*:
- *Protection of Women from Domestic Violence Act, 2005*: This Act protects women from any act/conduct/omission/commission that harms, injures or has potential to harm is to be considered as domestic violence. It protects the women from physical, sexual, emotional, verbal, psychological, economic abuse.⁷.
- *Protection of Women against Sexual Harassment at Workplace Bill, 2010*: on November 4, 2010, the Government introduced protection of Women Against Sexual Harassment at Workplace Bill, 2010, which aims at protecting the women at workplace not only to women employees but also to female clients, customers,

students, research scholars in colleges and universities, patients in hospitals.

The Bill was passed in Lok Sabha on 3.9.2012.

Importance of the Study

An important finding of WHO 2017 report on "Violence against Women" is **'Women who are less educated and have witnessed their mothers being abused, develop an attitude of accepting violence as male privilege and woman's subordinate status.'**

The WHO report 2017, on "Violence against women" developed in collaboration with London school of hygiene and tropical medicine and the South African Medical Research Council, is a systematic study of violence against women by intimate partner and by non partner. It specifies that such acts of violence have a tremendous long term and sometimes permanent negative impacts on the woman's physical, mental, sexual and reproductive health. Her life becomes a living hell if she is not able to come out of the trauma caused by this violence. And even if she is able to restructure, it is not the same as before.

In India there are many challenges to attain development but one of the prominent one is the evil cultural traditions that have been instrumental in violence against women. According to "The Thomson Reuters" survey in June 2018 India was ranked as the world's most dangerous country in the world for women. Surpassing even countries like Afghanistan and Syria.

Methodology

Introduction

This chapter discusses instruments for data collection needed for explorative research. It gives the procedure for development of questionnaire which is the instrument for data collection. The instrument is developed in two stages. In stage-1 pilot questionnaire is developed, which helps in refinement of final questionnaire. In stage -2 final questionnaire is developed. The data collected through final questionnaire is analyzed.

The basic step of study is problem identification & its objectives. This chapter deals with the research design & the methodology adopted for formulating the interrelationship.

Research Methodology:

This research involves a systematic process that focuses on objectives and gathering information for analysis. The research is a multiple step process where the steps are interlinked with the other steps in the process.

Research Methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It is also defined as the study of methods by which knowledge is gained.

Problem Identification through Literature Review

The first step of research design and methodology starts with the definition of the problem. For this extensive literature survey is carried out. Several National and International journals, International

conferences proceedings and research papers etc. are referred.

The status of women in India has been subject to many great alterations over the past few millenniums. From a largely unknown status in ancient times through the low points of the medieval period, to the promotion of equal rights by many reformers, the history of women in India has been lively.

Design of Questionnaire

A pilot questionnaire consists of a set of questions for obtaining information from respondents. A questionnaire enables quantitative data to be collected in a standardized way so that the data are internally consistent and coherent for analysis. A pilot questionnaire is designed with considering the educational level and experience of the responses. The language used and the context of the questions must all be familiar to the respondents.

In this research Likert scale is used to obtain the response of the respondents against each of the statements. The respondents were requested to indicate their degree of agreement by ticking one of five response categories such as Not Important, Slightly Important, Medium Important, Very Important and Most Important. Likert scale is easy to construct and administer and easy for respondent to understand.

Sources of Data

In this research both primary and secondary data are collected. It helped in covering every aspect of the study.

Primary Data

Primary data are collected specifically to address the search problem. The information is collected from citizens of Chhattisgarh region.

Secondary Data

The secondary data are collected from the different sources such as: published material from Journals, Working Papers, Magazines, Websites, etc.

Pilot Study Questionnaire

The questionnaire is pre-tested through a pilot survey involving the respondents in the proposed sampling frame. The purpose of pilot questionnaire is to obtain information to improve its content, format and sequence. It helps in finding out whether the questions are easy to understand by respondents or not. Sufficient time is given for amendments in the pilot study before the survey starts.

Pilot Study and Finalization of Questionnaire

The Pilot Questionnaire was accompanied by a covering letter which explains the purpose of the survey. The questionnaire was filled in 10 experts viz. academicians and professionals from Police department. Responses to each statement in the questionnaire were taken by ticking on the categories of agreement or disagreement using a 5 points likert scale.

Five point likert scale used in the questionnaire is shown in given below:

Source:	Disagree	Neutral	Agree	Strongly Agree
CCTNS report Chhattisgarh				
1	2	3	4	5
√	√	√	√	√

Data Collection (Sample Design)

Data Collection plays an important part in research study. In this research Quantitative method is used for data collection. Quantitative method relies on random sampling and structured data collection instruments that fit diverse experiences into predetermined response categories. They produce results that are easy to summarize, compare, and generalize.

The data collection methods play an important role in impact evaluation by providing information useful to understand the processes behind observed results and assess changes in people's perceptions of their well-being. It is used to improve the quality of survey-based quantitative evaluations by helping generate evaluation hypothesis; strengthening the design of survey questionnaires and expanding or clarifying quantitative evaluation findings.

Sample Size

Sample size affects the outcome of the research. Sample size has the effect of increasing statistical power by reducing sampling error. Larger sample sizes *reduce* the detrimental effects of non-normality. For sample sizes of 200 or more, however, these same effects may be negligible. Moreover, when group comparisons are made, such as in ANOVA, the differing sample sizes between groups are large enough, can even cancel out the detrimental effects. Thus this research has 393 responses (large sample size).

Percentage of Sample that picked a particular answer

Accuracy of the data also depends on the percentage of sample that picks a particular answer. If 99% of sample said "5" and 1% said "1" the chances of error are remote, irrespective of sample size. However, if the percentages are 51% and 49% the chances of error are much greater. It is easier to be sure of extreme answers than of middle-of-the road ones.

Analysis of data

After collection of the data from the respondents, it is carefully crafted to acquire desired knowledge. The following steps properly prepare data. They are:

Questionnaire checking

Questionnaire checking involves eliminating unacceptable questionnaires. These questionnaires may be incomplete, instructions not followed, little variance, missing pages etc.

Editing

Editing corrects illegible, incomplete, inconsistent and ambiguous answers.

The responses are sorted for the analysis. Correctly organized data save a lot of time and prevent mistakes. Statistical program (Microsoft excel and SPSS) are used to organize the data effectively. All data are entered in the same format and in same data base. Computation of Statistics such as: Mean, Standard Deviation, Variance, etc.

- a) Testing of research data through Adequacy, Reliability and Validity
- b) Factor analysis
- c) Correlation analysis

- d) Testing hypothesis

Data Analysis

Data Collection and Initial Screening

A structured questionnaire is prepared using literature survey and in-depth interview with concerned people. An in-depth interview helps in enriching the information and makes the qualitative analysis more focused. It helps in making the questionnaire more specific and accurate for a large stratified survey.

This study utilized a survey approach with a closed questionnaire. It was distributed to common people in Chhattisgarh region. To ensure proper representation of all we have chosen different AGE, different GENDER, different AREA OF LIVING and different OCCUPATION of Chhattisgarh state.

First survey was conducted with a closed questionnaire in this phase. The questionnaire was filled in by 10 experts viz. academicians and professionals from Police department.

Findings From Pilot Questionnaire

After the analysis of pilot questionnaire, the different variables are scrutinized to be included in the final questionnaire. The overlapping variables were also identified and merged into a single variable. New variables were also identified to be included in final questionnaire. The variables which were found to be less important were eliminated. Only those variables which were included in the final questionnaire had the greatest importance on performance measures. The variables were further categorised into justifiable factors.

Final Questionnaire

1	Personal Details								
1.1	Name of Respondent (Optional)				1.2	Area	Rural	Urban	
1.3	Marital Status	Married	Unmarried		1.4	Family	Joint	Nuclear	
1.5	Gender	Male	Female		1.6	Education	High School	12th	Graduation PG and Above
1.7	Age (yrs)	<30	30-40	41-50	> 50	1.8	Employment	Working	Non-working
1.9	Contact No. (Optional)				2.0	E-mail			

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
√	√	√	√	√

S. No.	Attribute	1	2	3	4	5
1.1	Awareness levels about crimes like eve-teasing, gender discrimination among common people has increased in past few years. (A101)					
1.2	Women are now more aware about their legal rights. (A102)					
1.3	Interaction with youth helps in boosting their knowledge regarding various crimes and their proper reporting. (A103)					
1.4	Increase in awareness levels has decreased domestic violence. (A104)					
2.1	Fast track courts have reduced long tedious process of seeking justice. (B101)					
2.2	Increase in punishment tenure(upto 20 years) for crimes against women increases faith in society. (B102)					
2.3	Opening MAHILA THANA/ all-women Police stations (WPS) has increased crime reporting figures. (B103)					
2.4	Due to strict laws and proper investigations, rape cases have decreased. (B104)					
2.5	New laws are sufficient to address the range of sexual violence faced by women. (B105)					

2.6	The new Police initiatives have led to a rise in arrests for Crime against women. (B106)					
3.1	Due to the positive response from society, people don't hesitate to report such crimes anymore. (C101)					
3.2	Now women don't feel embarrassed about lodging complaint about crime. (C102)					
3.3	Society's response towards rape victims has increased. (C103)					
3.4	Movements for women rights, gender equality, safety & justice have decreased crimes. (C104)					
4.1	Impact of social media is helping in drawing more attention to Crime against women. (D101)					
4.2	NGOs which assists women in filing complaints, develop confidence in women which in turn results in lodging an FIR. (D102)					
4.3	Free legal aid provided by few NGOs helps financially weak victims to lodge a complaint. (D103)					
4.4	Shelter/ protection homes offered by NGOs help financially weak victims to take decisions regarding lodging a complaint against domestic violence. (D104)					
4.5	Training and awareness programs run by them are useful to women especially in rural areas. (D105)					
4.6	NGOs help in raising voice at national platform for the benefit of all. (D106)					
5.1	Change in lifestyle/living standard has resulted in growth in Crime against women. (E101)					
5.2	Alcoholism is one of the major causes promoting Crime against women. (E102)					
5.3	Women having social / professional positions are more powerful in raising their voices against crimes. (E103)					
5.4	Lack of moral values is one of the contributing factors for Crime against women. (E104)					
5.5	Domestic violence is more prevalent in uneducated families. (E105)					

Research Hypothesis

H_{A1}: Area of the respondents is significantly associated with Awareness level;

H_{A2}: Area of the respondents is significantly associated with Justice Policies & Law reforms;

H_{A3}: Area of the respondents is significantly associated with Social Movements;

H_{A4}: Area of the respondents is significantly associated with NGO / Supportive agencies;

H_{A5}: Area of the respondents is significantly associated with Behavioral Aspect.

H_{B1}: Marital Status of the respondents is significantly associated with Awareness level;

H_{B2}: Marital Status of the respondents is significantly associated with Justice Policies & Law reforms;

H_{B3}: Marital Status of the respondents is significantly associated with Social Movements;

H_{B4}: Marital Status of the respondents is significantly associated with NGO / Supportive agencies;

H_{B5}: Marital Status of the respondents is significantly associated with Behavioral Aspect.

H_{C1}: Family Status of the respondents is significantly associated with Awareness level;

H_{C2}: Family Status of the respondents is significantly associated with Justice Policies & Law reforms;

H_{C3}: Family Status of the respondents is significantly associated with Social

Movements;

H_{C4}: Family Status of the respondents is significantly associated with NGO / Supportive agencies;

H_{C5}: Family Status of the respondents is significantly associated with Behavioral Aspect.

H_{D1}: Gender of the respondents is significantly associated with Awareness level;

H_{D2}: Gender of the respondents is significantly associated with Justice Policies & Law reforms;

H_{D3}: Gender of the respondents is significantly associated with Social Movements;

H_{D4}: Gender of the respondents is significantly associated with NGO / Supportive agencies;

H_{D5}: Gender of the respondents is significantly associated with Behavioral Aspect.

H_{E1}: Education of the respondents is significantly associated with Awareness level;

H_{E2}: Education of the respondents is significantly associated with Justice Policies & Law reforms;

H_{E3}: Education of the respondents is significantly associated with Social Movements;

H_{E4}: Education of the respondents is significantly associated with NGO / Supportive agencies;

H_{E5}: Education of the respondents is significantly associated with Behavioral Aspect.

H_{F1}: Age of the respondents is significantly associated with Awareness level;

H_{F2}: Age of the respondents is significantly associated with Justice Policies & Law reforms;

H_{F3}: Age of the respondents is significantly associated with Social Movements;

H_{F4}: Age of the respondents is significantly associated with NGO / Supportive agencies;

H_{F5}: Age of the respondents is significantly associated with Behavioral Aspect.

H_{G1}: Employment status of the respondents is significantly associated with Awareness level;

H_{G2}: Employment status of the respondents is significantly associated with Justice Policies & Law reforms;

H_{G3}: Employment status of the respondents is significantly associated with Social Movements;

H_{G4}: Employment status of the respondents is significantly associated with NGO / Supportive agencies;

H_{G5}: Employment status of the respondent is significantly associated with Behavioral Aspect.

RESPONSE RATE & PROFILE OF THE RESPONDENTS

After the distribution of 500 final questionnaires, a continuous follow up procedure was followed to get the responses. It resulted in receiving a total of 412 responses out of which only 339 were valid responses. It resulted in a response rate of 67.8% which is quite encouraging.

TESTING OF DATA

The tests of reliability, adequacy and validity are the major tests used to evaluate a measurement tool and subsequent measurements. The data should follow normal distribution. Data adequacy confirms that obtained data is sufficient for analysis. Validity refers to the extent of measure. The tests of sound measurement are:

- Sample Adequacy
- Validity
- Reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.833	25

CORRELATION MATRIX
Table for correlation matrix

A101	A102	A103	A104	B105	B106	C101	C102	C103	C104	D101	D102	D103	D104	D105	D106	E101	E102	E103	E104	E105	
1.000	.322	.431	.147	-.191	-.077	.143	.084	-.250	.137	-.002	.025	-.064	-.103	-.044	-.067	-.136	.056	.085	.073	-.075	
.322	1.000	.472	.320	-.085	-.043	.221	.202	.262	.143	.049	.056	.049	-.023	.008	.010	-.068	-.072	.127	-.054	-.069	
.431	.472	1.000	.335	-.390	-.198	.667	.097	.372	.119	-.055	-.069	-.132	-.199	-.076	-.196	-.335	-.122	.017	-.005	-.195	
.147	.320	.335	1.000	-.023	.092	.235	.284	.356	.343	-.020	.020	.051	.054	-.031	-.066	-.070	.042	.021	-.011	-.011	
-.108	-.084	-.268	.046	.570	.478	.213	.129	-.108	.158	.285	.300	.354	.403	.273	.310	.245	.114	.202	.155	.183	
-.125	-.117	-.174	.468	.394	.450	.150	.171	.041	.149	.310	.186	.225	.322	.190	.292	.124	.166	.227	.092	.182	
-.104	.050	-.108	.047	.392	.349	.271	.221	.054	.122	.248	.264	.341	.360	.303	.315	.231	.150	.303	.096	.155	
-.208	-.111	-.374	.051	.570	.466	.371	.466	.371	.466	.371	.466	.371	.466	.371	.466	.371	.466	.371	.466	.371	
-.191	.065	-.390	-.023	.509	.394	.302	.394	.302	.509	.394	.302	.394	.302	.509	.394	.302	.394	.302	.509	.394	
-.077	-.043	-.198	.092	.478	.450	.348	.450	.348	.478	.450	.348	.450	.348	.478	.450	.348	.450	.348	.478	.450	
.143	.221	.067	.235	.213	.150	.271	.157	.246	.358	.100	.652	.339	.374	.212	.217	.344	.345	.197	.280	.126	
.084	.202	.097	.284	.129	.171	.221	.097	.165	.295	.652	1.000	.392	.392	.191	.204	.227	.240	.210	.188	.112	
.250	.262	.372	.356	-.108	-.108	.041	.054	-.112	-.115	.020	.339	.392	1.000	.373	.107	.091	.001	.045	-.006	-.142	
.137	.143	.119	.143	.158	.149	.122	.184	.097	.219	.374	.392	.373	1.000	.069	.106	.078	.115	.117	.138	-.050	
-.002	.049	-.055	-.000	.285	.310	.248	.310	.219	.259	.212	.191	.107	.069	1.000	.474	.366	.343	.239	.316	.177	
.025	.059	-.069	.020	.300	.186	.264	.236	.326	.264	.217	.204	.091	.126	.474	1.000	.630	.582	.403	.487	.158	
-.064	.049	-.132	.051	.354	.225	.341	.351	.402	.347	.344	.227	-.001	.078	.356	.630	1.000	.583	.417	.598	.197	
-.103	-.023	-.199	.054	.403	.322	.360	.370	.457	.454	.345	.240	.010	.115	.343	.582	.583	1.000	.516	.562	.302	
-.044	.068	-.076	-.031	.273	.190	.303	.259	.278	.349	.197	.219	.045	.117	.239	.403	.417	.516	1.000	.529	.158	
-.067	.010	-.196	-.066	.310	.292	.315	.330	.400	.300	.280	.188	-.006	.138	.326	.487	.598	.582	.529	1.000	.233	
-.136	-.068	-.335	-.070	.245	.124	.231	.387	.392	.294	.126	.112	-.142	-.050	.177	.158	.157	.302	.158	.233	1.000	
.036	-.072	-.122	.042	.114	.166	.150	.197	.166	.147	.641	.018	.047	.075	.138	.220	.197	.200	.107	.170	.300	
.085	.127	.017	.021	.202	.202	.227	.303	.226	.199	.280	.193	.052	.173	.383	.389	.387	.358	.238	.299	.258	
.073	-.054	-.005	-.011	.155	.072	.095	.025	-.009	.131	.692	.038	.049	-.011	.235	.240	.225	.289	.209	.223	.115	
-.075	-.069	-.195	-.011	.183	.182	.155	.295	.261	.190	.105	.068	.010	-.023	.249	.187	.213	.259	.181	.296	.365	
																				.377	
																					1.000

The above table indicates the correlation matrix. It is simply a rectangular array of numbers which gives the correlation coefficients between a single variable and every other variables in the investigation. The Diagonal elements of the table should always be equals to one. Correlation table is used to check the pattern of relationship between variables.

Factor Analysis

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors.

There are two main types of factor analysis:

- **Principal component analysis** - This method provides a unique solution so that the original data can be reconstructed from the results. Thus, this method not only provides a solution but also works the other way round, i.e. provides data from the solution. The solution generated includes less than or as many factors as there are variables.
- **Common factor analysis** - This technique uses an estimate of common difference

or variance among the original variables to generate the solution. The number of factors will always be less than the number of original factors. So, "factor analysis" commonly refers to common factor analysis.

The standard deviation of each component is below 2 on 5-point scale which suggests that the components are not scattered.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Statistics is 0.860 which is significantly high which suggests that sample size and sampling techniques are adequate. The Significance Value of Bartlett's Statistics is 0.000 which suggests that Factor Model for this data is significant. So it can be concluded that Factor Analysis has been properly used.

Factor Communality Statistics

Communalities indicate the common variance shared by factors with given variables. Higher communality indicated that larger amount of the variance in the variable has been extracted by the factor solution. The communalities extraction for every component is greater than 0.4 which suggests that components are properly loaded.

**Common factor analysis
Descriptive Statistics**

	Mean	Std. Deviation
A101	3.58	.968
A102	3.71	1.012
A103	3.63	1.028
A104	3.57	.987
B101	3.71	1.015
B102	3.84	.996
B103	3.94	.858
B104	3.30	1.333
B105	3.29	1.218
B106	3.70	.954
C101	3.55	.907
C102	3.40	.951
C103	3.58	.888
C104	3.24	.969
D101	4.02	.825
D102	3.95	.783
D103	3.88	.773
D104	3.85	.814
D105	4.03	.793
D106	3.98	.749
E101	3.67	1.056
E102	4.17	.912
E103	4.14	.742
E104	4.23	.759
E105	3.83	1.008

Factor Community Statistics

	Communalities	
	Initial	Extraction
A101	1.000	.428
A102	1.000	.730
A103	1.000	.707
A104	1.000	.458
B101	1.000	.595
B102	1.000	.695
B103	1.000	.406
B104	1.000	.714
B105	1.000	.693
B106	1.000	.554
C101	1.000	.677
C102	1.000	.717
C103	1.000	.606
C104	1.000	.538
D101	1.000	.429
D102	1.000	.636
D103	1.000	.671
D104	1.000	.664
D105	1.000	.497
D106	1.000	.623
E101	1.000	.687
E102	1.000	.576
E103	1.000	.612
E104	1.000	.561
E105	1.000	.585

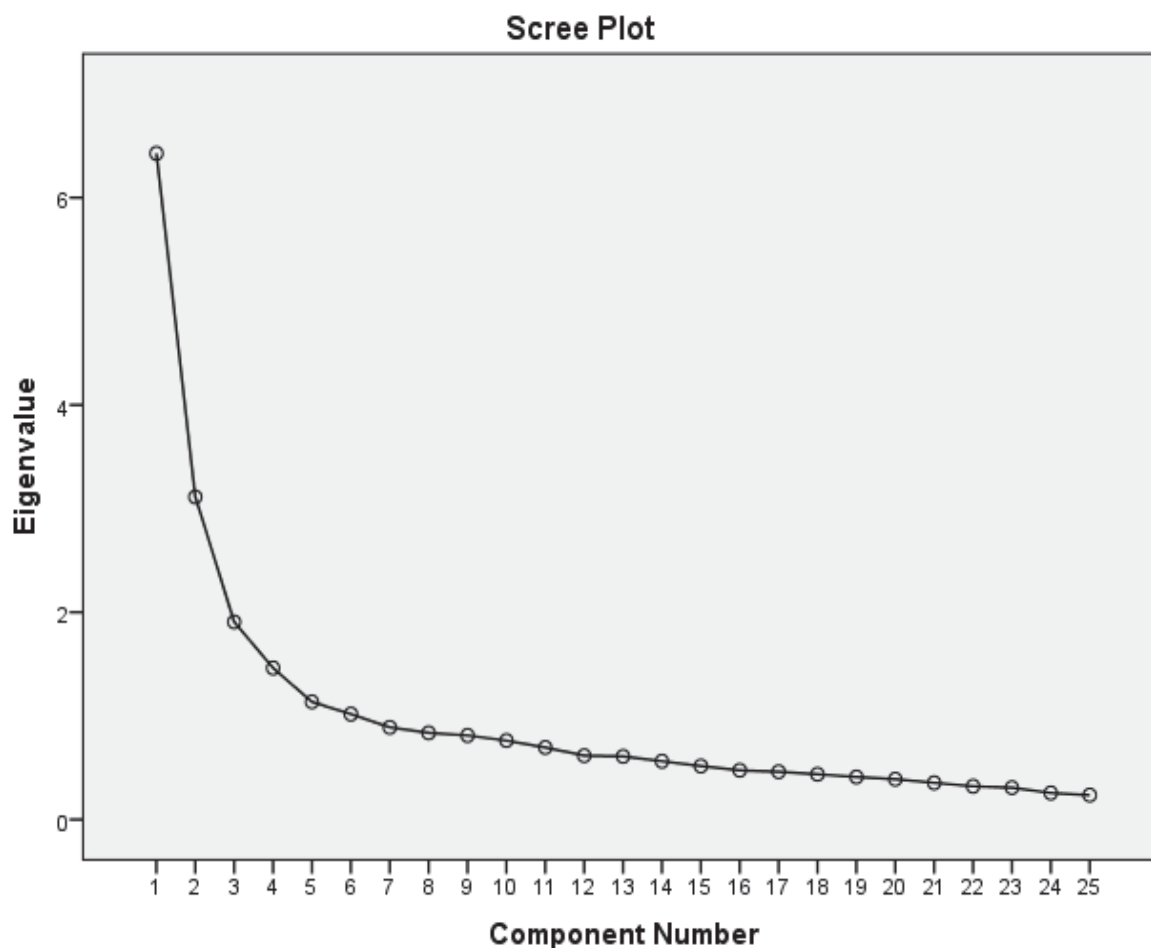
Total Variance Explained The total Variance Explained is 60.24 % which suggests that the data covers large variance of the model.

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.427	25.708	25.708	6.427	25.708	25.708	3.664	14.736	14.736
2	3.112	12.450	38.158	3.112	12.450	38.158	3.334	13.334	28.071
3	1.906	7.624	45.783	1.906	7.624	45.783	2.446	9.782	37.853
4	1.462	5.849	51.631	1.462	5.849	51.631	2.165	8.660	46.513
5	1.135	4.541	56.172	1.135	4.541	56.172	2.128	8.511	55.024
6	1.017	4.068	60.240	1.017	4.068	60.240	1.304	5.216	60.240
7	.890	3.559	63.799						
8	.936	3.344	67.143						
9	.811	3.243	70.386						
10	.761	3.046	73.432						
11	.695	2.779	76.210						
12	.616	2.463	78.673						
13	.609	2.437	81.110						
14	.562	2.250	83.360						
15	.516	2.063	85.423						
16	.476	1.902	87.325						
17	.461	1.843	89.168						
18	.436	1.744	90.912						
19	.410	1.642	92.554						
20	.388	1.553	94.107						
21	.354	1.416	95.523						
22	.321	1.263	96.806						
23	.307	1.227	98.033						
24	.256	1.025	99.058						
25	.236	.942	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot of the Total Variance Explained

The Eigenvalues have been taken to be 1. It can be observed that up to 6th component the total initial eigenvalue is more than 1 and up to 25th component, it is more than 0. So all the components are merged into 6 factors.



Factor Component Rotation

In order to explain a particular factor numerous questions are extracted to describe that factor. And hence questions A101, A102, A103 are merged and named **Awareness levels** and A104 is discarded due to cross loading. Questions B101, B102, B103, B104, B105 and B106 are merged and named

Justice Policies & Law reforms. Questions C101, C102, C103 and C104, are merged and named **Social Movements.** Questions D101, D102, D103, D104, D105 and D106 are merged and named **NGO / Supportive agencies.** Questions E102, E103, E104 and E105 are merged and named **Behavioral Aspect** and E101 is discarded due to cross loading. Finally total Five are extracted.

Rotated Component Matrix^a					
Component					
1	2	3	4	5	6
-.020	-.156	.109	.089	.609	-.112
.080	-.052	.131	-.106	.803	.219
-.086	-.226	.150	-.101	.730	-.287
-.150	.165	.475	.007	.427	-.023
.250	.719	.033	.045	-.108	.019
.093	.765	.101	.120	-.105	-.257
.294	.542	.097	.080	.072	.070
.153	.756	.031	.140	-.157	.272
.301	.621	.052	.046	-.178	.425
.263	.615	.265	.098	-.098	.132
.329	.099	.715	.016	.102	.192
.236	.048	.801	-.030	.034	.125
-.016	-.075	.626	.145	.332	-.279
-.013	.201	.695	-.015	.067	-.093
.444	.324	.009	.271	.107	-.203
.761	.152	.026	.148	.089	-.053
.770	.222	.055	.103	.041	.118
.719	.290	.136	.163	-.097	.093
.677	.139	.109	.029	-.079	-.008
.741	.182	.077	.122	-.101	.101
.118	.200	.011	.439	-.151	.646
.034	.104	.037	.746	-.015	.077
.336	.238	-.056	.593	.296	-.008
.318	-.062	.030	.561	-.080	-.366
.140	.119	.025	.704	-.105	.212
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 7 iterations.					

Analysis Of Variance (Anova)

• Area of the Respondents

Area of the respondents was classified under two categories namely 1 and 2 designated as 1 represents Urban and 2 represents Rural. To test the hypothesis, one-way ANOVA test was conducted.

		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	1.426	1	1.426	2.348	.126
	Within Groups	204.632	337	.607		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	.364	1	.364	.573	.449
	Within Groups	213.945	337	.635		
	Total	214.309	338			
Social Movements	Between Groups	.263	1	.263	.538	.464
	Within Groups	164.616	337	.488		
	Total	164.878	338			
NGO / Supportive agencies	Between Groups	1.910	1	1.910	5.585	.019
	Within Groups	115.259	337	.342		
	Total	117.169	338			
Behavioural aspect	Between Groups	.627	1	.627	1.704	.193
	Within Groups	123.978	337	.368		
	Total	124.604	338			

In above table, the significance values for ANOVA for NGO / supportive agencies are less than 0.05 which means, area of the respondents is significantly associated with the NGO / supportive agencies but not significantly associated with awareness levels, legal reforms, social movements and behavioural aspect. Therefore hypothesis H_{A1} , H_{A2} , H_{A3} and H_{A5} are not accepted and hypothesis H_{A4} is accepted.

• Marital Status of the Respondents

Marital status of the respondents was classified under two categories namely 1 and 2 designated as 1 represents Unmarried and 2 represents Married. To test the hypothesis, one-way ANOVA test was conducted.

		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	2.255	1	2.255	3.730	.054
	Within Groups	203.802	337	.605		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	7.944	1	7.944	12.972	.000
	Within Groups	206.365	337	.612		
	Total	214.309	338			
Social Movements	Between Groups	.018	1	.018	.036	.849
	Within Groups	164.861	337	.489		
	Total	164.878	338			
NGO / Supportive agencies	Between Groups	.567	1	.567	1.637	.202
	Within Groups	116.603	337	.346		
	Total	117.169	338			
Behavioural Aspect	Between Groups	1.496	1	1.496	4.096	.044
	Within Groups	123.108	337	.365		
	Total	124.604	338			

In above table, the significance values of ANOVA for legal reforms and behavioural aspect are less than 0.05 which means, marital status of the respondents is significantly associated with the legal reforms and behavioural aspect but not significantly associated with awareness levels, social movements and NGO / supportive agencies. Therefore hypothesis HB1, HB3 and HB4 are not accepted and hypothesis HB2 and HB5 will be accepted.

• **Family Status of the Respondents**

Family Status of the respondents was classified under two categories namely 1 and 2 designated as 1 represents Joint Family and 2 represents Nuclear Family. To test the hypothesis, one-way ANOVA test was conducted.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	.383	1	.383	.627	.429
	Within Groups	205.675	337	.610		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	1.394	1	1.394	2.207	.138
	Within Groups	212.915	337	.632		
	Total	214.309	338			
Social Movements	Between Groups	.860	1	.860	1.768	.185
	Within Groups	164.018	337	.487		
	Total	164.878	338			

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
NGO / Supportive agencies	Between Groups	.331	1	.331	.955	.329
	Within Groups	116.838	337	.347		
	Total	117.169	338			
Behavioural Aspect	Between Groups	.225	1	.225	.611	.435
	Within Groups	124.379	337	.369		
	Total	124.604	338			

In above table, the significance values for ANOVA are more than 0.05 which means, family status of the respondents is not significantly associated with the awareness levels, legal reforms, social movements, NGO / supportive agencies and behavioural aspect. Therefore hypotheses H_{C1} , H_{C2} , H_{C3} , H_{C4} and H_{C5} are not accepted.

- **Gender of the Respondents**

Gender of the respondents was classified under two categories namely 1 and 2 designated as 1 represents Male and 2 represents Female. To test the hypothesis of impact of Gender on Employee Performance, one-way ANOVA test was conducted.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	.157	1	.157	.257	.612
	Within Groups	205.900	337	.611		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	.390	1	.390	.614	.434
	Within Groups	213.919	337	.635		
	Total	214.309	338			
Social Movements	Between Groups	.031	1	.031	.064	.801
	Within Groups	164.847	337	.489		
	Total	164.878	338			
NGO / Supportive agencies	Between Groups	.713	1	.713	2.063	.152
	Within Groups	116.456	337	.346		
	Total	117.169	338			
Behavioural aspect	Between Groups	.022	1	.022	.059	.808
	Within Groups	124.582	337	.370		
	Total	124.604	338			

In above table, the significance values for ANOVA are more than 0.05 which means gender of the respondents is not significantly associated with the awareness levels, legal reforms, social movements, NGO / supportive agencies and behavioural aspect. Therefore hypotheses HD1, HD2, HD3, HD4 and HD5 are not accepted.

• **Education of the Respondents**

Education of Respondents was classified under four categories namely 1, 2, 3 & 4 designated as 1 represents High School, 2 represents 12th, 3 represents Graduation and 4 represents PG and above. To test the hypothesis, one-way ANOVA test was conducted.

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	2.711	3	.904	1.489	.217
	Within Groups	203.346	335	.607		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	1.506	3	.502	.790	.500
	Within Groups	212.803	335	.635		
	Total	214.309	338			
Social Movements	Between Groups	.839	3	.280	.571	.634
	Within Groups	164.040	335	.490		
	Total	164.878	338			
NGO / Supportive agencies	Between Groups	2.701	3	.900	2.635	.050
	Within Groups	114.468	335	.342		
	Total	117.169	338			
Behavioural aspect	Between Groups	1.955	3	.652	1.780	.151
	Within Groups	122.649	335	.366		
	Total	124.604	338			

In above table, the significance values for ANOVA are more than 0.05 which means, education of the respondents is not significantly associated with the awareness levels, legal reforms, social movements, NGO / supportive agencies and behavioural aspect. Therefore hypotheses H_{E1}, H_{E2}, H_{E3}, H_{E4} and H_{E5} are not accepted.

• **Age of the Respondents**

Age of Respondents was classified under four categories namely 1, 2, 3 & 4 designated as 1 represents less than 30, 2 represents 30 to 40, 3 represents 41 to 50 and 4 represents greater than 50. To test the hypothesis, one-way ANOVA test was conducted.

		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	.563	3	.188	.306	.821
	Within Groups	205.494	335	.613		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	8.330	3	2.777	4.516	.004
	Within Groups	205.979	335	.615		
	Total	214.309	338			
Social Movements	Between Groups	4.075	3	1.358	2.830	.038
	Within Groups	160.803	335	.480		
	Total	164.878	338			
NGO / Supportive agencies	Between Groups	.561	3	.187	.537	.657
	Within Groups	116.608	335	.348		
	Total	117.169	338			
Behavioural aspect	Between Groups	2.746	3	.915	2.516	.058
	Within Groups	121.858	335	.364		
	Total	124.604	338			

In above table, the significance values of ANOVA for Justice policies & Law reforms and Social Movements are less than 0.05 which means, Age of the respondents is significantly associated with the legal reforms and social movements but not significantly associated with awareness levels, NGO / supportive agencies and behavioural aspect. Therefore hypotheses H_{F1} , H_{F4} and H_{F5} are not accepted and hypotheses H_{F2} and H_{F3} will be accepted.

• Employment of the Respondents

Employment of the respondents was classified under two categories namely 1 and 2 designated as 1 represents Working and 2 represent Non-Working. To test the hypothesis of impact of Gender on Employee Performance, one-way ANOVA test was conducted.

		Sum of Squares	df	Mean Square	F	Sig.
Awareness levels	Between Groups	.112	1	.112	.184	.668
	Within Groups	205.945	337	.611		
	Total	206.058	338			
Policies & Legal reforms	Between Groups	4.653	1	4.653	7.478	.007
	Within Groups	209.656	337	.622		
	Total	214.309	338			
Social Movements	Between Groups	.305	1	.305	.625	.430
	Within Groups	164.573	337	.488		
	Total	164.878	338			

		Sum of Squares	df	Mean Square	F	Sig.
NGO / Supportive agencies	Between Groups	.000	1	.000	.000	.990
	Within Groups	117.169	337	.348		
	Total	117.169	338			
Behavioural aspect	Between Groups	.289	1	.289	.784	.376
	Within Groups	124.315	337	.369		
	Total	124.604	338			

In above table, the significance value of ANOVA for legal reforms is less than 0.05 which means, employment status of the respondents is significantly associated with the legal reforms but not significantly associated with awareness levels, social movements, NGO / supportive agencies and behavioural aspect. Therefore hypotheses H_{G1} , H_{G3} , H_{G4} and H_{G5} are not accepted and hypotheses H_{G2} will be accepted.

Results and Discussions

The status of women in India has been subject to many great alterations over the past few millenniums. From a largely unknown status in ancient times through the low points of the medieval period, to the promotion of equal rights by many reformers, the history of women in India has been lively. The status of women has varied in different time periods. Violence against women is partly a result of gender relations that assumes men to be superior to women. Manifestations of violence include physical aggression, such as blows of varying intensity, burns, attempted hanging, sexual abuse and rape, psychological violence through insults, humiliation, coercion, blackmail, economic or emotional threats, and control over speech and actions.

In extreme, but not unknown cases, death is the result. These expressions of violence take place in a man-woman relationship within the family, state and society. Usually, domestic aggression towards women and girls, due to various reasons remain hidden. Cultural and social factors are interlinked with the development and propagation of violent behaviour.

Factor analysis is carried out. Numerous questions are extracted to describe factors. **Awareness levels, Policies & Law reforms, Social Movements, NGO / Supportive agencies, Behavioral Aspect** are the total five factors are extracted.

Conclusion

Women in India have always been issues of concern. Currently many initiatives are being taken for Women empowerment. Increase rate of Women's literacy / education have helped them to occupy the social and professional positions in a powerful way and increase their voice against crime. The analysis shows that there has been increase in the registration of Crime especially after the Criminal law amendment which took place in 2013. The analysis also shows that the Women now are more aware of crimes and feel that these crimes should not go unreported. And

because of increase in awareness, Women don't feel embarrassed, ashamed in lodging complaint against crime.

The Government of India have come out with some stringent laws and created institutional mechanisms to protect the rights of women who are victims of violence of any kind occurring within the family or any other crime, and its is acting as a preventive measure to eradicate the crime.

The State Government of Chhattisgarh has taken lots of initiatives to address the problem of Women security like creation of :

- Help Desk for women in each Police station.
- Counselling Centers to address the issues related with domestic violence.
- Opening up of Mahilla Police Stations
- Launching of Women Help Line(1091)
- Dedicated Investigative units for investigation of Crime against Women.
- Mahilla Police Volunteers scheme
- One stop Center
- Integrating DIAL 112 with Women Security.

These are necessary and laudable steps. But no matter how economically independent the educated, urban woman becomes or how hard rural outreach programs work at improving feminine hygiene and maternal care, the narrative always meanders back to safety or the lack of it. Inclusion of Development narratives related with women will make a

big difference in the lives of daughters, sisters and mothers. However, ending crimes against women is still a challenge. We can prevent ills by ensuring women autonomy, also increased participation and decision making power in the family and public life both.

Scope For Further Study

- a) This study has been carried out in state of Chhattisgarh only. Similar type of studies can be carried out in different states.
- b) Further research can be carried out for safety improvement of women in various regions of the country as well as in global context.
- c) For this study the data has been taken during a fixed time duration.
- d) In this study different clusters have been considered. Further studies can be carried out in specific crimes, districts etc.

References

- [1]. R. Kalaiyarasi , Violence against women in India, *IoSR journal of humanities & Social Sciences*, Vol 20(2) . Feb 2015, pp 51-55
- [2] R. Deva kunchari, S. Bhowmik, S.P. Bhutada, Y. Shishodia, Analysis of crimes against women in India using Regression , *IJEAT*, Vol 8, Jan 2019, pp 124-127
- [3] Crime against women, Member's reference service, refernece note, 2013
- [4] Domestic violence in India, A summary report of three studies, Sept 1999
- [5] Y.Gurappa Naidu, Violence Against Women in India, Serials publications, New Delhi, 2011.

- [6]. Aadesh K. Devgan , Crime Against Women and Child, Cyber Tech Publications, New Delhi, 2008.
- [7]. Shobha Saxena, Crimes Against Women and Protective Laws, Deep & Deep Publications Pvt. Ltd, New Delhi,2004.
- [4]. Bedabati Mohanty, Violence Against Women, Kanishka Publishers, Distributors, New Delhi,2005, Pp 48-50, 87-89 [5]. Tamil Nadu Police Crime Report 2007,7
- [8]. "Addressing Domestic Violence Against Women: An Unfinished Agenda". Indian Journal of Community Medicine 73–76
- [9]. "Acid attack on women unchecked and unabated". The Hindu (Madurai) 13 September ,2014
- [10]. "Tamil Nadu records most no. of domestic violence cases". TNN The Times of India 3 December2012
- [11]. "Tamil Nadu Government makes mandatory CCTVs in public buildings". Press Trust of India. 8 January 2013.
- [12]. CrimereviewTamilNadu2007(Report). State Crime Records Bureau, Crime Branch CID, Chennai, TamilNadu.2007.
- [13]. Kosambi, Meera (19 93) Violence perpetrated against women in India (Report). Bangkok: UNESCO Principal Regional Office for Asia and the Pacific.
- [14]. "Women SHGs to spearhead campaign against liquor". The Hindu. 7 October 2013.
- [15]. "AnEpidemicofCrimesagainstWomen?". Mint(NewDelhi).13September2013.
- [16]. Authors: Nancy A. Crowell and Ann W. Burgess, Editors; Panel on Research on Violence Against Women, National Research Council
- [17]. Domestic Violence Against Women in India A.K.Singh, S.P.Singh and S.P.Pandey Journal of Gender Studies
- [18]. "Super Women Cops". Chennai: Women's Feature Service. 12 May2003.
- [19]. Narula, Smita (1999).Broken People: Caste Violence Against India's" untouchables".Human Rights Watch.
- [20]. www.tnlegalservices.tn.gov.in/pdfs/domesticviolence.
- [21]. www.indiatogether.org/women/violence/violence.htm.
- [22] Crime against Women and its Impact on Them: Veena Chhibber - July 2019
- [23] Violence Against Women in India: A Case for Research in Tackling the Menace: Ravindra Ghooi-31 May 2013.
- [24] Home For Sexually Absued Women: Katepalli Varshini on Jan 01, 2020.
- [25] Whose problem is it anyway? Crimes against women in India : B. L. Himabindu, Radhika Arora, and N. S. Prashanth.
- [26] Violence against women: Published: November 7, 2013
- [27] Crimes against women: Indian Scenario - Zene Qamar, Nov 06, 2019.
- [28] Empower of Women Women Law: ShubhamPatel , Apr 02, 2016.
- [29] Gender school and society: Abu Bashar, Jul 15, 2017
- [30] Domestic violence top crime against women, sedition cases doubled in 2018:Ananya Bhardwaj Jan 10, 2020.
- [31] Domestic Violence and Child Abuse: Dr. Mrs.B. Bala Parameswari, Feb 13, 2015.

The 'Golden Triangle' – A Hub of Narcotics Trade and Its Repercussions for North-East India vis-a-vis The Act East Policy – An Analysis



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Dr. Aprajita Baruah¹

Ms. Sharmistha Baruah²

Abstract

The problem of drug trafficking in India across the international borders has assumed monstrous proportions. It is a problem that is persistent basically in all parts of the world. Owing to its situation between the infamous 'Golden Triangle' and 'Golden Crescent', India is a significant course for drugs from Asia to Europe, Africa and the Americas and has played a dejected role in the drug trade for quite a long time. The article focuses on the issue of drug trafficking through the 'Golden Triangle' which is a location between the borders of Myanmar, Laos and Thailand and is one of the significant drug production centres in the world.

The authors through the article portray the flow of narcotics and psychotropic substances into India via the North-eastern region from the 'Golden Triangle' into India and its repercussion upon the North-eastern region of the nation. The authors also examine the issue in the light of the Act East Policy which seeks to bring about developmental opportunities for the North-East India through consistent commitment at bilateral, regional and multilateral levels by associating with its Asian neighbours. Finally, the authors comment on the serious repercussions brought about by the illicit drug trade along the Golden Triangle upon the implementation of the Act-East Policy.

Keywords: Drug Trafficking, Golden Triangle, North-East India, South-East Asia, Act East Policy.

1. Introduction

Drug trafficking is a problem that resonates and invigorates itself in basically all parts of the world. In India, it generally comprises nationals from India, Afghanistan, Pakistan, Bangladesh and

Nepal. There are two significant focuses of drug production in Asia; the '**Golden Crescent**' involving Afghanistan, North West Frontier Province of Pakistan and the Central Asian Republics and the '**Golden Triangle**' containing Myanmar, Thailand

Author's Intro:

1. Assistant Professor, P.G. Department of Law, Gauhati University, Guwahati
2. Research Scholar, P.G. Department of Law, Gauhati University, Guwahati

and Laos: these regions border India in the North-West and North-East separately (Sharmah, 2018).

India has played a dejected role in the drug trade for quite a long time. Located between the famous 'Golden Triangle' and 'Golden Crescent', India is a significant course for drugs from Asia to Europe, Africa and the Americas. Adding further to the hardship, different psychotropic and pharmaceutical preparations and precursor synthetic substances created locally as well as in different parts of the world are also trafficked through the Indian fringes. The two-way unlawful flow of these drugs and synthetic compounds not only infiltrates India's border security, but also puts at risk public security and thus operates as a genuine danger to the country. It is because of the increasing trend in drug trafficking activities that is causing high incidences of drug addiction among population of the nation, targeting mostly the young generation.

2. Objective of the Study

1. The authors through this paper aim at studying the geographical hub of illegal narcotics trade referred to as the 'Golden Triangle' comprising the countries Myanmar, Thailand and Laos, and its serious implications for the North-Eastern region.
2. The author in the paper has discussed the increasing incidences of drugs trafficking activities which have resulted in rising occurrences of

drug addiction among the young generation thereby causing serious concern for the North-Eastern region.

3. The authors also seek to analyse the repercussion of the illicit narcotics trade upon the Act East Policy which aims to bring forth developmental opportunities for the North-Eastern region of our nation.

3. Research Methodology

The present paper is both descriptive and analytical in nature. The authors have used secondary data to meet the objective of the study and have therefore, done extensive and intensive doctrinal research. The data for the research has been compiled from an in-depth study of the related books, articles, various reports of national as well as international authorities and documents published in the related field.

4. 'Golden Triangle' – The Hub For Illicit Drugs Trade in South-East Asia

The peninsular mass of Mainland South-East Asia is not only one of Asia's historically significant intersections; it is furthermore eminent worldwide for holding the alleged 'Golden Triangle'- one of the two primary territories of illicit opium production of Asia and the world. In any case, to the extent that unlawful exercises are concerned, contemporary Mainland South-East Asia is referred to not just as a locus of illegal drugs production but also as a drug dealing center and a huge narcotics consumer

market (Chouvy, 2010, para. 1).

Generally, the 'Golden Triangle' is a location between the borders of Myanmar, Laos and Thailand. It is the stretch of mainland South-East Asia where the vast majority of the world's illegal opium has originated since the mid-1950s and until 1990, preceding Afghanistan's opium production which exceeded that of Myanmar.

It is situated in the highlands of the fan-formed alleviation of the Indo-Chinese peninsula, where the international borders of Myanmar, Laos and Thailand run. Heroin and Methamphetamine are produced fundamentally in Burma (presently Myanmar) and trafficked intensely all through the locale. Heroin and Methamphetamine might be consumed regionally (both in Mainland and in Insular South-East Asia) or might be sent out to China (by means of the territory of Yunnan), to India (by means of its North-Eastern states), or abroad, generally to Japan, Australia, and North and South America (Chouvy, 2010, para. 2).

Narcotics dealing have been greatly sought after in Myanmar since 1950s by extremist groups like "Olive's Boys" drove by Olive Yang who created the 'Golden Triangle', the great drug realm that rose from South-East Asia's jungles (Swami, 2016). The permeable borders of India can make it possible for entry of huge quantities of narcotics and thus exaggerate the already existing issues of security of human health and welfare of

the society.

The trend and statistics of opium poppy cultivation in and around the 'Golden Triangle' reveal a continuous rise till the year 2016 ever since the mid-nineteenth century. As per the United Nations Office on Drugs and Crime (UNODC) *South-East Asia Opium Survey 2017*, Opium poppy cultivation in Myanmar and Laos People's Democratic Republic (PDR) increased to 63,800 hectares in 2014 in comparison to 61,200 hectares in 2013, escalating for the eighth successive year and nearly tripling the quantity produced in 2006 (UNODC, 2014). However, due to the increase in the opium poppy cultivation in Afghanistan since 2013 there has been a decrease in areas under opium poppy cultivation in the 'Golden Triangle' (UNODC, 2019, p. 25-26). Myanmar witnesses a decline in the amount of land being used to cultivate opium poppy.

As of 2019 some 37,300 hectares of land was under poppy cultivation down from 41,000 hectares in 2017 ("Myanmar Cracking", 2019). There has been a quick rise in the supply and demand for synthetic drugs and particularly methamphetamine across East and South-East Asia as well as the neighbouring regions as per UNODC Report of 2019. Hence, making it clear that the downward trend in opium cultivation and related heroin production is the cause of trading in synthetic substances ("Myanmar Cracking", 2019).

The mainland South-East Asia has incidences of numerous other significant

smuggling and trafficking activities: from the international trade in small arms, in nuclear and other radioactive materials, to the global trade in unlawfully logged timber, wood products, and wildlife. It is worth noting at once, that some of these trafficking activities can be differentiated from many others because they comprise instances of environmental harm and or exploitative activities (Chouvy, 2010, para. 3).

4.1. Drug Routes of Mainland South-East Asia

Mainland South-East Asia or also known as 'Indochina' owing to its situation between India and China has been perceptible for decades because of its trafficking in illegal goods. Unlawful trades in Mainland South-East Asia are various, extremely diverse, and progressively multifaceted. Of them, the two most prominent illegal trades of the region are - **Human trafficking** and **Drug trafficking**. Human trafficking feeds the colossal regional prostitution market and Thailand being worldwide renowned for that reason; and drug dealing, in reference to opium and heroin produced in bulk in the ill-famed 'Golden Triangle' (Chouvy, 2010, para. 1).

Until the early 1990s, Thailand was the major trafficking route for heroin in South-East Asia. However, owing to a number of reasons, reorientation of drug trafficking routes within South-East Asia and development of new routes to other parts of the continent took place. The Thai crackdown on heroin

trafficking, which occurred in the 1980s, significantly reduced the use of its well-developed roadway by traffickers from Burma (Myanmar); followed by patrols of northern Thailand and its Western border by the Third Army and the Border Patrol Police also led to the disruption of the routes used across the Thai-Burmese border by opium convoys. However, in recent years, towards the northwest of the Thai kingdom, the old trails of the former Communist Party of Thailand, as well as outposts of Thai bases of the Chinese Nationalist Kuomintang or Kuomintang of China (KMT), have been extensively used by traffickers mostly carrying methamphetamine (Chouvy, 2014).

The mercantile opening of both southern China and North-East India since the mid-1980s has likewise preferred the surfacing of "new" routes. Since 1985 Heroin dealers have been following the renowned Burma highway passing through the Burma-China perimeter posts of Muse and Ruili and continuing on through Baoshan, an old Yunnanese point of nineteenth century opium trafficking, then through Dali and Kunming (Chouvy, 2014).

While China is undoubtedly the primary transit destination for heroin from Burma, it is not the only one, North-East India sharing a border of 1463 km with Burma, also draws some of the traffic. Opium and heroin are transported from Myanmar by road to the North-Eastern States of Nagaland, Manipur and Mizoram.

It is considered by the Assam Police that narcotics, particularly heroin and brown sugar which are manufactured by the drug lords in the 'Golden Triangle' region, wherein high-grade poppy seeds are cultivated in abundance, are transported to the North-Eastern States of India. These transshipments find their way out through Tamu (Myanmar)-Moreh (Manipur)-Nagaland-Assam, Myanmar-Mizoram-Assam, Mizoram-Barak Valley (Assam)-Bangladesh routes. In the course of action, Guwahati, the entrance to the North-East India, has become the primary transit point for drug trafficking. However, reports reveal that some drugs manufactured in the 'Golden Triangle' are believed to be entering India via Bangladesh (Kumar, 2004).

5. The North-East India Link to The 'Golden Triangle'

Being close to the '**Golden Triangle**', which is the tri-junction of Myanmar (Burma), Thailand and Laos PDR, the North-East India has been one of the worst-affected regions. The 'Golden Triangle' accounts for over sixty percent of narcotics traded across the world and is infamous for illicit cultivation of opium poppy which has contributed to a substantial rise in the consumption of opiates among the South-East Asian population; thereby, furthering a prospect for producing the vast majority of the illicit drug trade in the North-East India.

The porosity of the 1,463 km international borders of Indo-Myanmar via North-East

has led to the huge inflow of various varieties of drugs (Sharma, 2016, p. 65). The international border with Myanmar consists largely of hilly and remote topography. Opium as well as heroin is transported by road all the way from the poppy fields in North-East Myanmar through Bhamo, Lashio and Mandalay into the North-Eastern region of India. The foremost drug trafficking routes start from West Myanmar to the States of Nagaland, Manipur and Mizoram, thereafter, it reaches Guwahati, the prime city of North-East India, enroute to Kolkata and the rest of the country. In fact, the region is said to be the shortest route from South-East Asia to the metros of the Asian sub-continent (Reddy, 2007, p. 74).

The North-Eastern region has consequently become a soft target for a range of synthetic drugs produced by warlords and criminal gangs in Myanmar. The scenario is such that it is not only drugs which are being brought from the 'Golden Triangle' into India, but the same routes are being used to smuggle narcotics out of India as well, hence creating a two-way passage for illegal trade in drugs. This has some long lasting ramifications for the region, one such consequence is the funding it inadvertently provides for the insurgent groups of the North-East India (Sharma, 2016, p. 65). Another consequence of the drug trafficking activity is also the spread of AIDS/HIV in nearly all the States of the North-East India, especially Nagaland,

Manipur and Mizoram which are worst affected.

Thus, a flourishing trade in narcotics along the Indo-Myanmar border has financially aided many insurgent groups for carrying on their violent military campaigns. In North-East, the illicit drug trade is helping the militants procure arms for their secessionist operations. Despite launching several operations through the Customs Department, Border Security Forces [BSF], Assam Rifles and even State Excise Department across the Indo-Myanmar as well as the Indo-Bangladesh borders and although several seizures have been made during the last couple of years; yet the menace has not been contained (Reddy, 2007).

In view of poor economic conditions many young persons are compelled to transport contraband across the borders. In fact the State of Mizoram has turned out to be a 'springboard' for smuggling non-conventional psychotropic substances to countries like Bangladesh, Myanmar and even Thailand (Reddy, 2007).

In a statement given by an official of the Government of India at Imphal, India is likely to be flooded with drugs from Myanmar in the upcoming years unless interfered by Rangoon by taking up greater preventive measures. China, Bangladesh, Laos and Thailand are also teeming with this synthetic drug manufactured in Myanmar. Large quantities of synthetic drugs are trans-shipped to India through the coastal routes in the Bay of Bengal

also (Sharma, 2016).

Therefore, the threat of opium trade intimidates regional integration. Development plans are in progress to expand transport connections, and reduce trade barriers as well as border controls. This bears the risk of providing organised crime networks ample scope to take advantage of the regional integration process.

5.1. The North-East Scenario of the Illicit Narcotics Trade

India's North-East has been sinking profoundly into a drug catastrophe that has sunk its teeth deep into the texture of the North-Eastern culture. Youngsters are getting high on addictive and unfriendly stimulants that leave their body shuddering and shivering as they are shipped to a different universe by and large, though for a couple of seconds in particular. Strangely, the Chinese variant of Viagra has been found in numerous eastern towns of Mizoram. Further, addicts are depending on modest choices, for example, cough syrups and pain-killer tablets to get a high. For instance, in Mizoram the powder of 'Spasmo Proxyvon' painkiller capsule is diluted in water and infused intravenously by the young addicts. (Reddy, 2007).

Myanmar is India's gateway to South-East Asia. Adjoining Myanmar to the east are the four Indian states of Arunachal Pradesh, Manipur, Mizoram and Nagaland. The data from National

AIDS Control Organisation demonstrates each of these four states' rising numbers of HIV related diseases and increasing drug trafficking activities. As the routes of western Myanmar are guarded by the insurgents of India's North-East, hence, narcotics and contraband weapons have on a regular basis been trafficked across the unmanned border (Goswami, 2014).

Lately, Manipur has seen enormous amounts of trafficking of Pseudoephedrine Hydrochloride (PH) content drugs, made in India, being smuggled into Myanmar for processing narcotics particularly heroin. The ongoing ethnic revolts of Manipur with their own "tax structure" help to fuel the issue. Pseudoephedrine is trafficked from New Delhi to Myanmar and China through Guwahati by conduits situated in Nagaland, Manipur and Mizoram (Goswami, 2014). The permeable outskirts and disturbing ascent in substance abuse in the area and beyond, has added to the 'thriving' business. This accompanies a colossal cost as the crime percentages and HIV contaminations have shot up in the North-East India.

The findings of a cross-sectional study upon young persons who inject drugs and HIV risks conducted in the year 2019 in India's North-eastern states indicated that India has an expected 2.2 million individuals living with HIV and an expected 1.1 million people who inject drugs [PWID]. The study further indicated that younger generation of the region

are highly prone to drug abuse and hence as a consequence are at high risk of HIV contamination, owing to certain behaviours amongst the youths of the North-eastern region, in particular needle-sharing and unprotected sex (Ganapathi, 2019). Moreover, in terms of percentage affected population, the foremost states in the country are those in the North-East (Mizoram, Nagaland, Arunachal Pradesh, Sikkim, Manipur) apart from Punjab, Haryana and Delhi (Ambekar et al., 2019, p. 4).

The thriving narcotics trade in the region has helped fund scores of rebel armies for running their sadistic military campaigns and secessionist movements. In Nagaland and Manipur insurgent groups have been regularly gathering taxes from every family, government contractors and employees, transporters, businessmen and even government officials including ministers. However, the circumstance is rapidly changing; insurgent groups have begun to trade in illicit narcotics to raise finance to maintain the insurgency going. Illicit trade in narcotics and arms generates billions of dollars on the black market and is the chief source of financing terrorism, insurgency and organised crime, which have global implications. It is incomprehensible to battle them without battling the danger of drug trafficking.

6. The Repercussion of The Illicit Narcotics Trade upon the Implementation of the

Act-East Policy: An Analysis

India's North-East, consisting of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Sikkim, shares ninety-eight per cent of its land periphery with Bangladesh, Bhutan, China, Nepal and Myanmar. Its resource-rich expanse is a national asset. The hydroelectric, oil, gas, coal, bio-diversity and agro-silvicultural prospects hold out the guarantee of national solutions through regional progress and will add infinitely to national security in every respect.

In spite of its resources, the region lacks in development in contrast to the other regions of India. The reasons are: their remoteness being landlocked States, insufficient access to markets, poor infrastructure and network with the rest of the country, issues of land acquisition, widespread utilisation of conventional techniques in cultivation, inadequate cold storage for warehouse and transportation, absence of banking institutions to lend credits as well as absence of guarantors for credits, ignorance of business sectors, contending nature of demands, raw material sourcing, innovation, branding and fixing quality standards, huge dependence of educated persons on government occupations or else relocation from the region in search of better opportunities, adverse or disgraceful disposition towards labour-specific jobs, dependence on local markets and poor broadcast communications availability (Pattnaik, 2016, para. 4).

Evaluating its possibilities and limitations, the '**North-Eastern Vision 2020**' was uncovered to bring improvement which inter alia highlighted to reinforce infrastructure, to develop communications, to connect north-eastern region with ASEAN by opening up the ocean course through the Chittagong port and the land courses through Myanmar and China, to establish agro-handling enterprises and sericulture, to venture in production units based on the resources accessible in the region and to utilise fully the potential of the large hydroelectric power generation and lay stress on developing services such as tourism (Pattnaik, 2015).

All these with a view to boosting advancement and generating productive service openings, provide scope for skill development, generating entrepreneurship tendency, provision for investments, enhancing public-private cooperation and empowering climate for the progression of investments to strap up the physical resources of the region in the interests of public. Therefore, the accomplishment of this vision lies in how efficiently the Act-East Policy is incorporated with India's North-East by developing connectivity passage as well as tending to the nation's security concerns (Pattnaik, 2015).

6.1. “Act East through North-East” – The Act-East Policy:

The ‘Look East Policy’ changed into the ‘**Act-East Policy**’ under the present political administration driven by Prime Minister Narendra Modi. This agreement has mandated a vigorous and result-oriented tact to achieve India’s national interest in its Eastern neighbourhood. The piecemeal methodology is apparently supplanted by a proactive one to guide the course with a renewed strength to secure concrete results in geo-strategic as well as geo-economic terms. Contextualised in India’s North-East, the policy has remained a mere expression; yet the current step has created a lot of hopefulness among the scholarly community, policy-makers and other stakeholders in the region for a relook at the policy with a new criterion (Pattnaik, 2015).

India’s Act-East Policy centres around the extended neighbourhood in the Asia-Pacific region. The policy which was initially considered as a financial proposal, has achieved political, tactical and cultural facets including foundation of institutional system for dialogue and collaboration (“Act East Policy”, 2016). India has updated its relations with Southeast Asian Nations (ASEAN) and formed close bond with all countries in the Asia-Pacific region (“India’s Act East”, 2019).

The Objective of the Act-East Policy is to advance financial participation, social ties and create vital relationship with nations in the Asia-Pacific region through consistent

commitment at bilateral, regional and multilateral levels accordingly giving upgraded network to the States of North-Eastern Region. India has been working on plans of building fiscal strip in North-East India’s neighbourhood to enhance foreign trade and to give the economy the necessary step forward. The main concern of the Act-East Policy (AEP) is the development of North-East of India. AEP offers an annexation between North-East India including the State of Arunachal Pradesh and the ASEAN region (“India’s Act East”, 2019).

Various efforts to expand and reinforce connectivity of North-East with the ASEAN region by means of trade, culture, people-to-people contacts and physical infrastructure including road, airport, telecommunication, power, etc. have been going on at both bilateral as well as regional levels. Some of the significant tasks include Kaladan Multi-modal Transit Transport Project, the India-Myanmar-Thailand Trilateral Highway Project, Rhi-Tiddim Road Project, Border Haats, etc. (“VK Singh enunciates”, 2015). Execution of these plans is crucial to achieving the goals of India’s Act-East Policy.

6.2. The Repercussion of the illicit narcotic trade upon the implementation of the Act-East Policy:

North-East India can progress, flourish and finally prevail over its troubles by engaging its eastern foreign neighbours, but, there is the ‘Golden Triangle’ which

is the reason of concern. Illicit drug trade along the Golden Triangle has serious repercussions for the implementation of the '**Act-East Policy**' upon India's North-East and its development. The repercussions have been stated under the following points (Goswami, 2014):

- To start with, opening up to South-East Asia conveys a two-fold edged blade. On the one hand, it guarantees advancement and funds and on the other hand, it welcomes the peril of rapid dispense of illegal drugs and arms.
- Secondly, without a viable drug control machinery that ensures that illegal traffic is kept at the lowest, the unfavourable outcomes of unlawful drugs on North-East people could leave long lasting negative impacts.
- Thirdly, India ought to build up institutional mechanisms with China, Myanmar and Thailand to counter illegal trafficking. Yet, given the present Indo-China connection, it is by all accounts seems to be an implausible idea, henceforth, the danger persists.
- Last but not least, the new routes connecting the North-East with its eastern neighbours offer easy accessibility to traffic huge quantities of illicit narcotics and inflate the already existing issues of human wellbeing and prosperity of society, thus, it is an imperative need of the

hour to think about the issues and tighten the security of the region, then consider about growth and development; for there cannot be prosperity without security.

India's Act-East Policy, in spite of the fact that is a vital foreign policy as it is both helpful to enhance trade and financial relations with East Asia, yet it poses a threat because of weak democratic setting and flourishing anti-national movements in the eastern vicinity. With the recent agreement on the Bangladesh, China, India, Myanmar (BCIM) economic corridor blueprint, India's narcotics trafficking scenario is dangerously hovering at the moment owing to the easy accessibility to the markets in China's west and south-west regions via North-East Indian borders. Hence, there is every possibility that the amount of illicit narcotics would significantly increase with this new network(Sharmah, 2018).

It is pertinent to mention here that the Memorandum of Understanding (MOU) signed between India and Myanmar in the year 2014 to share information, synchronise patrolling across the international perimeter, exchange information for fighting rebellion, arms smuggling and drug trafficking and kick-off measures for thwarting illegal cross-border movements ("India and Myanmar sign Memorandum",2014), if implemented in genuine sense and spirit,

would guarantee 'peace, stability and security' across the international border.

7. Conclusion - Suggestions and Recommendations

To tackle the issue of drug trafficking and to defend the nation's borders against such infringements, India has employed a mix of measures. On the one hand, it has enacted stringent anti-drug laws, nominated various voluntary organisations and sought to strengthen the physical security of its borders by various means; on the other hand it has been seeking the cooperation of its neighbours and other countries through several bilateral and multilateral agreements. But these efforts have only been partially successful in dealing with the problem.

For achieving greater success in preventing drug trafficking, a few suggestions are put forth:

1. Highest priority ought to be accorded towards prevention of drug trafficking. Currently, it forms part of the larger mandate of the border guarding forces to avert smuggling and any other prohibited activity. Special steps should be planned to check trafficking of drugs through the borders.
2. Improved coordination among various agencies is a necessary step to thwart away the menace.
3. Information/intelligence gathered regarding drug trafficking, its analysis and broadcasting potential need to be fortified.
4. The problem of corruption among the border security forces and various organisations concerned needs to be tackled in a more realistic manner. On the one hand, strict penalties to be meted out to those officials involved in drug trafficking activities; on the other hand, steps to provide appropriate reward in the form of incentives to those who work diligently towards preventing the menace should also be introduced.
5. To determine the degree of the problem it is strongly advisable to maintain a detailed track record of the manufacture, trade and utilisation of various drugs at the national level.
6. Various national laws framed for the control of the illicit narcotics trade ought to be executed rigidly and stricter punishments should be provided to drug traders.
7. With a view to diverting the farmers from unlawfully cultivating opium poppy and cannabis, the government should make feasible options available to the poor farmers. One such step has been taken up by an Imphal based entrepreneur Mr. Ragesh Keisham whose company takes farms on lease from marginal farmers, who were once illegal cultivators of poppy and cannabis. These farms are now utilised

for growing lemongrass (Wangchuk, 2020).

8. It is pertinent to rejuvenate organisations such as the SAARC Drug Offence Monitoring Desk [SDOMD]. Facilities for integrated development of workforce involved in prevention of drug trafficking in India and its neighbouring areas should be improved.
9. Better collaboration with neighbours on issues of illicit drug dealing needs to be formed.
10. The Act East Policy is to be constantly checked on to ensure that the national interest prevails for the benefit of all the collaborators in the region.

The complicated assignment of fighting drug trafficking entails managing infringements of national laws, international conventions and also related monetary crimes like corruption, tax avoidance, money laundering and crimes of aggression, terrorism etc. It is now high time to construct a group of devoted officials in the field of narcotics law enforcement who are all around trained and equipped with updated information combined with related skills to efficiently battle this threat (*Abhishek Chetal v. Central Bureau of Investigation and Ors.* 2016, para. 27).¹To attain this goal, training programmes should be directed at all levels so as to upgrade and sharpen the potentialities needed to improve execution and viability of the faculty associated with drug law enforcement. Hence, it is only with

concerted efforts of both government and public that this monstrous problem can be contained.

References

1. Ambekar A, Agrawal A, Rao R, Mishra AK, Khandelwal SK, Chadda RK on behalf of the group of investigators for the National Survey on Extent and Pattern of Substance Use in India (2019). *Magnitude of Substance Use in India*. New Delhi: Ministry of Social Justice and Empowerment, Government of India.
2. *Act East Policy*. (2016). Insights on India. Retrieved 31 October, 2020 from <https://www.insightsonindia.com/wp-content/uploads/2016/12/Act-East-Policy.pdf>
3. Chouvy Pierre Arnaud Chouvy. (2010). *Illegal Trades across National Borders of Mainland Southeast Asia*. In Le Roux P., Baffie J., Beullier G. (Eds.) *Trade in Human Beings for Sex in Southeast Asia* (pp. 305 – 326). White Lotus Press.
4. Chouvy Pierre Arnaud. (2014, July 25). *Drug trafficking in and out of the Golden Triangle*. Hal Archives. Retrieved September 23, 2020, from <https://hal.archives-ouvertes.fr/hal-01050968>
5. Criminal -Micellaneous No. 44010 of 2016.
6. Ganapathi Lakshmi, McFall Allison M, Srikrishnan Aylur K, Kumar Muniratnam S, Anand Santhanam, Lucas Gregory M, Mehta Shruti H, Harris Sion K, & Sunil S Solomon. (2019, May). *Young People Who Inject Drugs in India have High HIV Incidence and Behavioural Risk:*

¹ Criminal -Micellaneous No. 44010 of 2016.

- A Cross-Sectional Study. *Journal of the International Aids Society*. 22(5). National Centre for Biotechnology Information. Retrieved 30 October, 2020 from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6530044/>
7. Goswami Namrata. (2014, February 10). Drugs and the Golden Triangle: Renewed Concerns for Northeast India. Institute of Defence Studies and Analyse. Retrieved 01 November, 2020 from https://idsa.in/idsacomments/DrugsandtheGoldenTriangle_ngoswami_100214
 8. India's Act East Policy. (2019). IAS Abhigyan. Retrieved 31 October, 2020 from <https://www.iasabhiyan.com/indias-act-east-policy-2/>
 9. Kumar Mukul. (2004, September 28). Doctors' take Drug Trafficking to New Areas in Eastern India. Institute of Peace and Conflict Studies. Retrieved 15 October, 2020, from http://www.ipcs.org/comm_select.php?articleNo=1512
 10. Ministry of External Affairs. (2014, May 10). India and Myanmar sign Memorandum of Understanding on Border Cooperation. Retrieved 02 November, 2020 from <https://www.mea.gov.in/pressreleases.htm?dtl/23315/India+and+Myanmar+sign+Memorandum+of+Understanding+on+Border+Cooperation>
 11. *Myanmar cracking down on opium, but conflicts push drug trade*. (2019 January 11). Al Jazeera.com. retrieved September 23, 2020 from [com/news/2019/01/11/myanmar-cracking-down-on-opium-but-conflicts-push-drug-trade/](https://www.aljazeera.com/news/2019/01/11/myanmar-cracking-down-on-opium-but-conflicts-push-drug-trade/)
 12. Pattnaik Jajati K. (2016) Look East Policy and India's Northeastern Region: Status of Cross Border Trade and Connectivity. In Das Gurudas, & Thomas C. Joshua (Eds.). *Look East to Act East Policy: Implications for India's Northeast*. Routledge India.
 13. Pattnaik Jajati K. (2015). Act East through the North East. *Mainstream*, 53(16). Retrieved 31 October, 2020 from <http://www.mainstreamweekly.net/article5596.html>
 14. Reddy P.L. Sanjeev, & Reddy P.C. Shekar Reddy. (2007). *Peace and Development in Northeast: a Virtuous Spiral*. Mittal Publications.
 15. Sarmah Shambhavi. (2018, July 11). *Drug Trafficking in India: A neglected issue on the rise*. Youth Form on Foreign Policy. Retrieved September 16, 2020 from <https://yffpindia.wordpress.com/2015/07/11/drug-trafficking-in-india-a-neglected-issue-on-the-rise/>
 16. Sharma Tripti (2016). India-Southeast Asia Relations: Economic Cooperation to Strategic Partnership. *Political Discourse*, 2(1), 63-77.
 17. Swami, Praveen. (2016, October 15). In tale of drugs, guns: Reason why end of war might not mean peace for Myanmar. *The Indian Express*.
 18. United Nations Office on Drugs and Crime Research-UNODC. (2014, June).

- South-East Asia Opium Survey 2014- Lao PDR, Myanmar*. Retrieved September 17, 2020 from <https://www.unodc.org/southeastasiaandpacific>
19. United Nations Office on Drugs and Crime- UNODC. (2019 March) *Synthetic Drugs in East and South-East Asia: Trends and Patterns of Amphetamine-type Stimulants and New Psychoactive Substances*. Global Smart Report.
20. V.K. Singh enunciates on Act East Policy. (2015, December 23). *The Sangai Express*. <http://e-pao.net/GP.asp?src=4..241215.dec15>
21. Wangchuk Rinchen Norbu. (2020, October 29). Earning Rs. 8 Crore, Manipur Man's Unique Tea Frees Farmers from Drugs, Uplifts 2000. *The Better India*. retrieved 02 November, 2020 from <https://www.thebetterindia.com/240777/manipur-cc-tea-lemongrass-tea-health-benefits-order-online-herbal-organic-small-farmers-poppy-cannabis-imphal-india-nor41/>

Insights into the Role of Police for Implementation of Domestic Violence Act in India



The Indian Police Journal
@BPRD, MHA
BPRD Publication
www.bprd.gov.in

Dr. Alok Sharma*

ABSTRACT

Domestic violence against women is an omnipresent fact to maintain and reinforce women's subordination. For the last few decades, many women's groups started movement throughout the world resulting in many initiatives by the international community especially the United Nations resulting in directions to all State parties to the Conventions to take immediate steps to control and eradicate this evil by modifying the existing laws comprehensively or by enacting new laws in this regard. The Protection of Women from Domestic Violence Act, 2005 is the resultant Indian law to address the issue of domestic violence to impart justice and relief to its victims. It has reduced the procedural formalities by providing for an inbuilt mechanism to facilitate the entire system of access to justice. It identifies specific functionaries like the protection officers and service providers whose primary duty is to assist women in accessing reliefs provided under the Act. The Act confers similar responsibilities on Police by specifying their duties and powers in these cases. The present paper deals with the role of Police in the implementation of the Act, their approach and difficulties, and suggestions for improvement. Some data, collected by the author for her Ph.D. research, have been used to highlight the issues.

Keywords: Police, Domestic Violence Act, Implementation, Functionaries, Aggrieved Persons.

Introduction

Violence against women is an apparent and irrefutable fact in all the countries irrespective of development. It operates as a means to maintain and reinforce women's subordination. There are various actors and factors which play crucial roles in infliction

of domestic violence. A number of theories have been propounded to explain the causes of domestic violence which has grave consequences on health, family and economy etc. For the last few decades, there has been a large increase in the number of domestic violence cases. Therefore, many women's

Author's Intro:

* Senior Assistant Professor, Faculty of Law, University of Delhi, Delhi

groups started movement all over the world including India to address and remove this evil. Under the pressure of these movements and gradual awareness about the human rights issues, the international community especially the United Nations has taken many initiatives in this regard.

The emphasis in those international documents was on the fact that women also need to enjoy a life free from violence in both public and private spheres. Therefore, it was conveyed that all State parties to the Conventions took immediate steps to control and eradicate this evil by modifying the existing laws comprehensively to incorporate provisions about removal of violence against women or enact new laws in this regard. The United Nations has prepared a model legislation and provided it to all the State parties to follow it in law making process. Many countries enacted legislations prohibiting domestic violence and protecting women from it while taking the responsibility for it including India with little variations.

The Protection of Women from Domestic Violence Act, 2005 (hereinafter referred as 'the Act') is that law which is a path-breaking step that recognizes the presence and gravity of domestic violence and attempts to address it to impart justice and relief to its victims. It has specifically categorized and broadly defined 'domestic violence' and 'domestic relationship' covering many women. It identifies specific functionaries viz., the protection officers and service providers to assist victims. In addition, the Act confers similar responsibilities on Police, the already existing and functional

machinery of the State. Many reliefs are available to the aggrieved person under the Act and the Magistrate has been put under various obligation to impart justice speedily.

The Act primarily authorises the protection officers and service providers to play a pivotal role but it also specifies the duties and powers of Police in domestic violence cases reported to them by aggrieved persons viz., affected women. The present paper deals primarily with the role of Police in the implementation of the Act. It will analyse the duties and powers conferred on Police under the Act and the Protection of Women from Domestic Violence Rules, 2006 (hereinafter referred as 'the Rules') and their practical implementation to assist aggrieved persons to get justice. In order to highlight these issues, some data have been used here which were collected by the author for her Ph.D. research. In this milieu, the present paper deals with the role of Police in implementation of the Act, their approach and difficulties, and suggestions for improvements.

The Protection of Women from Domestic Violence Act, 2005

The Act was passed by parliament in 2005 unanimously from a new perspective devoid of any patriarchal values. The primary objective of the Act is to prohibit domestic violence and protect women from it. It is a civil remedy and does not emphasise punishing the abuser. The Act reflects a progress by legally recognising the prevalence of domestic violence in India and addressing it as a violation of distinct human rights. It facilitates the understanding of the grave

impact of domestic violence on women's lives and tries to heal it. The salient features of the Act are as follows:

- The Act is primarily a civil law providing remedies in the event of infliction of domestic violence to women but having one criminal provision to be applicable in the event of breach of protection order.
- It provides a much broader definition of domestic violence¹ that includes physical, sexual, economic, verbal and emotional abuse in domestic relationships
- It provides a much broader definition of domestic relationships which is based on consanguinity; marriage; through a relationship in the nature of marriage; adoption; and family members living together as joint family.
- It specifically recognizes women's right to live in violence free homes without any fear of illegal dispossession from the shared household.²
- It provides a wide range of remedies which were even not recognised earlier by law. They are protection order³, residence order⁴, monetary relief⁵, custody order⁶, compensation order⁷, and ex parte and interim orders.⁸
- All these relief may also be sought in any

1 Section 3.

2 Section 17.

3 Section 18.

4 Section 19.

5 Section 20.

6 Section 21.

7 Section 22.

8 Section 23.

other pending legal proceedings and any relief sought under this Act shall be in addition to other relief that the aggrieved person may seek under those proceedings.⁹

- It has reduced the procedural formalities thereby making it easier for the victims to approach the system as it provides for an inbuilt mechanism to facilitate the entire system of access to justice.
- The inbuilt mechanism consists of two special functionaries viz., the Protection Officers and the Service Providers whose primary duty is to assist women in accessing reliefs provided under the Act by submitting domestic incident reports and providing other assistance in implementing the orders of the court.¹⁰
- The responsibilities conferred on the Service Providers are inter alia, to provide for mandatory access of aggrieved persons to state medical facilities, shelter homes, and legal services centres.¹¹
- It is incumbent on the Magistrate to avoid loss of time in trial by following fixed time frame for it.
- The Magistrates are empowered to coin their own special procedure to follow during the trial of these cases.
- The Magistrates are empowered to decide on the sole testimony of the aggrieved person in case they believe it to be trustworthy and they, if desire, can

9 Section 26.

10 Section 9.

11 Section 10.

also conduct the proceedings in camera.

Role of Functionaries under the Act

The Act in Chapter III has created a comprehensive machinery to ensure the effective and speedy implementation of its provisions and has appointed many functionaries to assist the aggrieved persons in availing the reliefs provided by the Act. The Police officers, protection officers, service providers, and magistrates are the functionaries appointed under the Act. The Act imposes a common duty on all the functionaries to inform the aggrieved persons of their available rights, reliefs and services under Section 5 of the Act which is as follows:

“Section 5. Duties of Police officers, service providers and Magistrate.—

A Police officer, Protection Officer, service provider or Magistrate who has received a complaint of domestic violence or is otherwise present at the place of an incident of domestic violence or when the incident of domestic violence is reported to him, shall inform the aggrieved person—

- (a) of her right to make an application for obtaining a relief by way of a protection order, an order for monetary relief, a custody order, a residence order, a compensation order or more than one such order under this Act;
- (b) of the availability of services of service providers;
- (c) of the availability of services of the Protection Officers;

(d) of her right to free legal services under the Legal Services Authorities Act, 1987 (39 of 1987);

(e) of her right to file a complaint under Section 498A of the Indian Penal Code (45 of 1860), wherever relevant: Provided that nothing in this Act shall be construed in any manner as to relieve a Police officer from his duty to proceed in accordance with law upon receipt of information as to the commission of a cognizable offence.”

Section 5 imposes a duty on all the functionaries under the Act that after receiving the complaint of incident of domestic violence, they have to inform the aggrieved person of her right to make an application under the Act for obtaining specified reliefs. This provision further incumbent upon them the responsibility of informing the aggrieved person about the availability of services of Service Providers and Protection Officers, right to get free legal aid and right to lodge an FIR under Section 498A Indian Penal Code, 1860 when the information provided disclosed commission of that offence. It is a comprehensive provision as it mentions all the rights available under the Act in short.

Protection Officer: One of the most important functionaries who are the backbone of the Act is the Protection Officer.¹² The creation of protection officer is based on the idea that women require more than Police alone therefore, a protection officer is needed to enable women to access various social services. The State Govt. shall appoint them

12. Section 2(n): “Protection Officer” means an officer appointed by the State Government under sub-section (1) of section 8.”

and they should be preferably women having requisite qualifications and experience.¹³ They are under control and supervision of Magistrate and have to perform duties imposed on them by the Magistrate and the Govt.¹⁴ The Rule lays down the procedure for receiving information about commission of domestic violence.¹⁵

The Act prescribes many duties and functions of protection officer. It says that the protection officer will “assist the Magistrate in the discharge of his functions; submit Domestic Incident Report to the Magistrate upon receipt of complaint of domestic violence; make an application to the Magistrate for aggrieved person claiming issuance of a protection order; ensure that aggrieved person is provided legal aid; maintain a list of all Service Providers providing legal aid, counselling, shelter homes and medical facilities; make available a safe shelter home if aggrieved person so requires; get the aggrieved person medically examined; ensure that order for monetary relief u/s 20

is complied with and executed; and perform other duties.”¹⁶

In addition to these duties, the Rules also prescribe many duties of protection officer including “to provide aggrieved person information about her rights; to prepare a “Safety Plan”; to inform service providers that their services may be required; to provide all possible assistance to aggrieved person and her children; to liaise between the aggrieved person and others; and to protect the aggrieved persons from domestic violence.”¹⁷ The Rules further prescribe certain other duties of protection officer.¹⁸ However, protection officer is not a Police officer and does not have any authority to forcibly seize any article or take over possession of any premises. Further, protection officer cannot probe into cognizable offences and is not expected to confiscate weapon(s) involved in domestic violence. The protection officers can be penalized for failing/refusing to discharge their duties¹⁹ with a proviso that prior sanction of State Govt. is required.²⁰

Service Provider: Service Provider,²¹ generally NGO, is another wonderful creation

13 Section 8 and Rule 3: “Qualifications and experience of Protection Officers.- (1) The Protection Officers appointed by the State Government may be of the Government or members of non-governmental organizations: Provided that preference shall be given to women; (2) Every person appointed as Protection Officer under the Act shall have at least three years experience in social sector; (3) The tenure of a Protection Officer shall be a minimum period of three years; (4) The State Government shall provide necessary office assistance to the Protection Officer for the efficient discharge of his or her functions under the Act and these rules.”

14 Section 9(2).

15 Rule 4: “Information to Protection Officers.- (1) Any person who has reason to believe that an act of domestic violence has been, or is being, or is likely to be committed may give information about it to the Protection Officer having jurisdiction in the area either orally or in writing; (2) In case the information is given to the Protection Officer under sub-rule (1) orally, he or she shall cause it to be reduced to in writing and shall ensure that the same is signed by the person giving such information and in case the information is not in a position to furnish written information the Protection Officer shall satisfy and keep a record of the identity of the person giving such information; (3) The Protection Officer shall give a copy of the information recorded by him immediately to the informant free of cost.”

16 Section 9(1).

17 Rule 8.

18 Rule 10: “The Protection Officer, if directed to do so in writing, by the Magistrate shall- conduct a home visit of the shared household premises and make preliminary enquiry if the court requires clarification, in regard to granting ex-parte interim relief to the aggrieved person; after making appropriate inquiry, file a report on the emoluments, assets, bank accounts or any other documents; restore the possession of the personal effects including gifts and jewellery of the aggrieved person and the shared household to the aggrieved person; assist the aggrieved person to regain custody of children and secure rights to visit them under his supervision; assist the court in enforcement of orders in the proceedings under the Act; take the assistance of the Police in confiscating any weapon involved in the alleged D.V.”

19 Section 33.

20 Section 34.

21 Section 2(r): “service provider means an entity registered under sub-section (1) of section 10.”

and additional functionary to aid and assist the protection officer and aggrieved person. "A voluntary association registered under Societies Registration Act; a company registered under Companies Act or any organization whose objective is protecting the rights and interests of women by any lawful means including providing of legal aid, medical, financial or other assistance can be appointed by the State Govt. as a service provider for the purposes of this Act."²² The Rules provide detailed guidelines and requirements for their registration.²³ The Act prescribe their duties and powers to record Domestic Incident Report; to get the aggrieved person medically examined; and to provide shelter in shelter homes.²⁴ Further, Counsellors²⁵ shall also be appointed from these organizations for reconciliation between the parties.

Role of Police Officials under the Act

The role of a Police officer in society is not only to arrest the abuser but also to behave like a social worker, counsellor, guide and mentor.

22 Section 10(1) of the Act and Rule 11(1).

23 Rule 11(3): "Every association or company seeking registration under sub-section (1) of section 10 shall possess the following eligibility criteria, namely:- (a) It should have been rendering the kind of services it is offering under the Act for at least three years before the date of application for registration under the Act and these rules as a service provider; (b) In case an applicant for registration is running a medical facility, or a psychiatric counseling centre, or a vocational training institution, the State Government shall ensure that the applicant fulfils the requirements for running such a facility or institution laid down by the respective regulatory authorities regulating the respective professions or institutions; (c) In case an applicant for registration is running a shelter home, the State Government shall, through an officer or any authority or agency authorized by it, inspect the shelter home, prepare a report and record its finding on the report, detailing that- (i) the maximum capacity of such shelter home for intake of persons seeking shelter; (ii) the place is secure for running a shelter home for women and that adequate security arrangements can be put in place for the shelter home; (iii) the shelter home has a record of maintaining a functional telephone connection or other communication media for the use of the inmates."

24 Section 10(2).

25 Rule 2 (c).

Apparently, there is not much role assigned to the Police officials under the Act but on analysing the Act, it is clear that the role of Police is specified in many provisions of the Act and the Rules. The victims of domestic violence are unaware about the availability of other functionaries under the Act or even about the Act itself. As Police are existing and known functionaries of the State, a large majority of victims approach the Police stations to file their complaints. From this very stage, the role and functions of Police begin.

Firstly, if the information reveals commission of any cognizable offence like grievous hurt, dowry death, cruelty under Section 498A then Police have to perform their normal duties under Code of Criminal Procedure, 1973 and take appropriate action of investigation, arrest etc.²⁶ Secondly, they have to tell the victim about her rights and reliefs viz., protection order, order for monetary relief, custody order, residence order, compensation order or more than one such order available under the Act. Thirdly, they can refer the victim to the Service Providers, a special functionary under the Act, for recording of Domestic Incident Report and further actions. Fourthly, they can refer the victim to the Protection Officer, another special functionary under the Act, to do the same.²⁷

Fifthly, they must inform victim of her right to get free legal services under Section 12(c) of the Legal Services Authorities Act, 1987.²⁸ Sixthly, they must take cognizance of any breach of Protection Order, arrest the violator

26 Section 5 and Section 36.

27 Section 5.

28 Section 5.

and file a charge sheet in the court in this context.²⁹ Seventhly, they have to comply with all the orders issued by the court requiring their assistance³⁰ and lastly, Police are entitled to get the copies of all the documents filed by various functionaries under the Act and also copies of all orders passed by the court so that they must be aware regarding the progress of the cases.³¹ Therefore, despite the Act being civil legislation but still Police have many duties and powers under the Act.

Role of Police Officials under the Act: Empirical Aspect

The empirical study generally provides the authenticity to the analysis and the outcome of any issue. The data used in the present research paper has been collected by the author during her Ph.D. research to find out proper implementation of the Act in NCT Delhi which included the Police Officials of various Police stations from all the Judicial Districts of Delhi who assisted such implementation amongst other functionaries. The present analysis by using that data can show the role of Police in implementing the Act practically. It is very interesting to note that NCT Delhi has been divided in Judicial Districts in one way and Police/Administrative Districts in the other way, not only in numbers but also in locations. One Police station is covered in one judicial district but at the same time covered under another administrative district. However, researcher has conducted

her study in Police stations as per judicial division. Being geographically large area so for this stratum, the cluster sampling³² and more specifically area sampling³³ was used for initial clusters i.e., primary sampling units were all the eleven judicial districts having 177 Police stations in all and secondary sampling units were Police stations in each district selected by simple proportionate random sampling method.³⁴ As size of sample is not a guarantee of its representative character as relatively small samples properly selected may be more reliable than large samples improperly selected. In sampling, every item in the universe must have the same chance for inclusion in sample.³⁵ The total number of samples/ participants who were interviewed was 130 which was divided in seven categories out of which the Police Officials were 30 in number. The detail of the sample for the study is given below:

29 Section 31 and Section 32.

30 Sections 24 and 20(4); Sections 19 (5) and 19 (7).

31 Section 9 (1) (b) of the Act and Rule 5 (1); Sections 9 (1) (f) and 10 (2) (c); Sections 9 (1) (g) and 10 (2) (b).

32 "Cluster sampling implies dividing population into clusters or groups and drawing random sample either from all clusters or selected clusters. This method is used when (a) cluster criteria are significant for the study, and (b) economic considerations are significant." Ahuja, Ram, "Research Methods," Rawat Publications, 2012 at p. 173.

33 "Area sampling is quite close to cluster sampling and is often talked about when the total geographical area of interest happens to be big one. Under area sampling first divide the total area into a number of smaller non-overlapping areas, generally called geographical clusters, then a number of these smaller areas are randomly selected, and all units in these small areas are included in the sample." Kothari, C.R., "Research Methodology, Methods and Techniques," New Age International Publishers, 2005 at p. 16.

34 "Proportionate sampling is one in which the sample unit is proportionate to the size of the sampling unit. As the number of Police stations varies in different districts so researcher has selected the number of Police stations in one district in proportion to the total number of Police stations in the said district by simple random sampling method thereby it becomes proportionate random sampling method."

35 Singh, Y.K. and Bajpai, R.B., "Research Methodology: Techniques and Trends," APH Publishing Corporation, New Delhi, 2008 at pp. 151-152.

Table-1: Particulars and Number of Samples

S. No.	Particulars of the Sample	Number of Samples
1.	Magistrate	21
2.	Protection Officer	18
3.	Service Provider	20
4.	Police Official	30
5.	Aggrieved Person	30
6.	Government Official	01
7.	Advocate	10
Total		130

The Police officials were selected mainly from the cadre of sub-inspector who dealt with these cases in daily routine to find out their approach and difficulties while dealing with domestic violence cases and its victims. Initially, some of the officers were reluctant to talk but later on majority of them gave their opinion about the issues involved. It appeared that most of them were under the belief that they had no role to play under the Act. Some officers informed about the absence of any such case with them or in that Police station or that they referred those matters to CAW Cells/Mediation Cells/Protection Officers as they were the right fora for those cases.

The number of male Police officials was higher than that of female officials. All of them received training after their recruitment and almost all attended in-service refresher courses to update them regarding the existing and new laws and to sensitise themselves about women and their issues. About their perception

of their role under the Act, they gave different responses.

Figure-1: Role of Police Officials under the Act



Majority of them stated that they were saviour of aggrieved person (61.68%) and they referred the matter to the protection officers (26.66%) because in such cases relationships were involved and Police interference would complicate the matter. The other responses were that they had power to punish (6.66%) and had no role at all under the Act (5%). However, few respondents also mentioned that they referred the matter to mediator/counsellor. It means they are conditioned in their role of protector of people and they take action in requisite conditions.

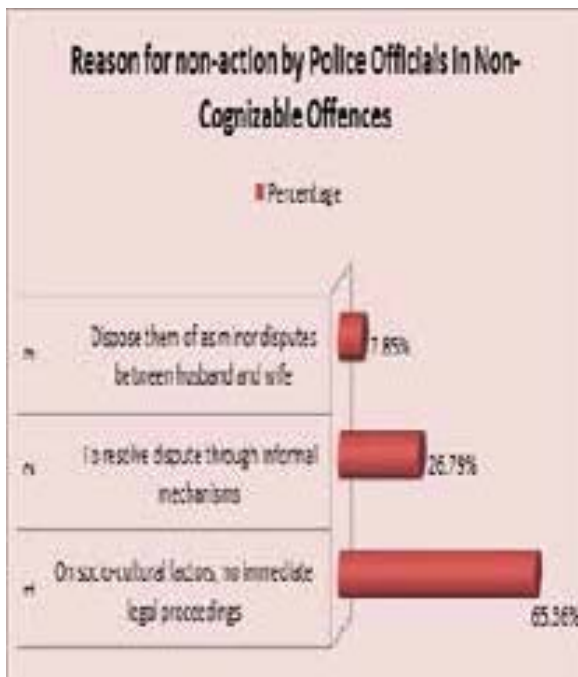
On asking what they did upon receipt of information as to commission of a cognizable offence during commission of domestic violence,³⁶ the majority of them, 66.67% replied that they immediately registered an FIR, 26.67% said that they did some preliminary inquiry about commission of the offence and 6.66% accepted for sending aggrieved person to the protection officer

36 Proviso to Section 5.

and also to CAW Cell. It shows that generally Police officials follow the procedure and record FIR immediately in such cases.

On asking whether they registered a case upon receipt of information as to the commission of a non-cognizable offence, almost all of them (93.33%) replied in the negative as they are not required to do the same. On asking the reason, majority of respondents accepted that on socio-cultural factors, they did not immediately initiate legal proceedings against accused persons (65.36%) followed by they tried to resolve the dispute through informal mechanisms as it was helpful in these cases (26.79%) and lastly disposed them of as minor disputes between husband and wife (7.85%) leading to the conclusion that they want to protect the institution of marriage by settling the issues between husband and wife.

Figure-2: Reason for non-action by Police Officials in Non-Cognizable Offences



The Police officials are entitled to get copies of various documents submitted by different functionaries under the Act but rarely do they get any such copies from the protection officers or service providers except the orders of magistrate to them, clearly reflecting the lack of coordination from different functionaries as required by the Act. Sixty percent Police official accepted that mandatory counselling saved family from breaking thus highlighting the approach to protect the institution of marriage.

The Police provide immediate assistance to other functionaries if they ask for it in emergency situations of commission or likelihood of commission of domestic violence against aggrieved person.³⁷ The Police officials are duty bound to accompany the other functionaries to save the aggrieved person which they follow however, there is a lack of cooperation and coordination among different functionaries.

Section 31 is the relevant provision for a breach of protection order/interim protection order as it is an offence under the Act and punishable with imprisonment or with fine or with both. Rule 15 deals comprehensively with the breach of protection orders. Interestingly, majority of the Police Officials³⁸ refused to receive any such complaints from the aggrieved persons. Out of those who got such complaints, majority of Police officials accepted that they arrested abuser for such breach as required, followed by rescuing her with the assistance of the protection officer.³⁹

37 Rule 9.

38 Rule 15 (4).

39 Rule 15 (5).

Figure-3: Action by Police Officials for Breach of Protection Order



Suggestions Provided by Police Officials

The Police officials gave many suggestions including requirement of clarity in the definitions and other provisions of the Act to make it more specific, precise, clear and not in contradiction with other laws; criminalising the Act more to be really effective; enhancement of penalty for breach of protection order or interim protection order u/s 31 of the Act; shorten the process to get justice; making it a gender neutral law; prevention of misuse of the Act by taking penal action against misusers; grant of immediate relief; unorganized implementation of the Act by the authorities; untrained functionaries; complete lack of coordination among different functionaries under the Act; unawareness among people about the Act; change of mindset of stakeholders; and mandatory counselling in all cases as there is a high probability of reconciliation there. All the suggestions are very pertinent and useful for better implementation of Act.

Problems Encountered by the Police

It is a glaring reality that Police have to face many genuine problems during performance of their duties. General perception is that Police face no problems and if they want to help, they can do that but sometimes Police also have certain limitations. Many reports and recommendations of various committees highlighted this fact. As far as performance of Police in the implementation of the Act is concerned, they also have to face various problems during investigation and trial of these cases. Some of these problems have been enumerated here.

Firstly, there is a lack of Police staff and facilities in the Police stations including a lack of even sufficient vehicles to approach people in need. There is grave insufficiency of Police staff to deal with such cases effectively and due to this reason, they are already overburdened with various other criminal cases having no time to spend on these cases which are equally important. Secondly, as maintenance of law and order and investigation of cases are done by the same officials, they cannot conduct investigation properly due to variety of works.

Thirdly, it is problematic to deal with the victims as when they inform them about their rights under the Act, they think that Police do not want to work on their complaints as Police refer them to protection officers/ mediation cells etc. Moreover, being a family matter about relationships Police cannot satisfy both the parties and whichever party is dissatisfied alleges that Police are corrupt etc. and implicates the Police itself in a number

of cases. Fourthly, lack of periodic trainings by the experts in the field to provide quality information and knowledge about the Act and even if trainings have been conducted by the department, they are almost negligible and thereby ineffective.

Gaps on the part of Police

The Police have many genuine problems but they are not free from any blames. It is another reality that there is a lack of faith of aggrieved persons in the integrity of Police. The Police officials generally do not investigate themselves the cases involving the issue of domestic violence and mostly, they refer these matters to CAW Cells/Mediation Cells/Protection Officers due to the perception that these are the appropriate for a as they have no role to play under the Act.

There is another issue which is the mindset of the Police officials that domestic violence is a private affair in which they cannot play any role. The Police disposed of these cases as minor disputes between husband and wife by not registering any report of them and at the most they sent them to the protection officer. Clearly Police do not want to take any action in such cases by considering them as family matters not to be interfered with.

The Police hardly inform the aggrieved persons about their various available rights under the Act and refer them to protection officers for this purpose. It is a common concern that Police implement orders and register cases for breach of protection order only after receiving courts' order otherwise they do not entertain such applications. Generally, Police do not arrest the violator

considering it as a family matter.

Lack of empathy and sensitization towards aggrieved persons is the other concern. They believe that most of the aggrieved persons are misusing the Act for various reasons as they do not have any interest in filing FIRs rather they consider it to be a quick way of seeking divorce; settlement in terms of money; to settle property dispute; to invoke property rights; to settle a personal score; high temperament of women; misguidance by the parental family and parental interference; having misconceptions that it would reform the husband; to dominate the marital family; and media attention. Of course, there can be some such cases but not many.

Suggestions for Effective Role of Police

The Police are the only agency available at all times without official cost to begin with and also constitutionally bound to protect women from domestic violence. But as compared to the work they do their number is very less and they are heavily overburdened. Therefore, more Police officials are to be recruited immediately so that workload would be distributed and they can concentrate and deal with these cases in a better way. Further, they do not have even basic requisites therefore, facilities must be provided for them to take appropriate action as per the situation. The long-awaited reform is immediately required that maintenance of law and order should be separated from investigation of cases. Only then can investigation be conducted properly.

The effective implementation of the Act would depend on the proper training of the

Police under the Act. But it is quite unfortunate that despite being specifically provided in the Act⁴⁰ generally no proper trainings have been conducted for them resulting in unawareness about the provisions and issues in the Act. There must be conduction of compulsory trainings for Police to make them more aware and sensitive towards women related issues; the provisions of the Act; their roles and functions; and need to cooperate with other functionaries under the Act. However, single training is not enough thus, as prescribed by the Act, periodic training and refresher courses, seminars and conferences must be organized to convey new developments. Sensitization programmes must be organized for them to make them more receptive in handling such cases and it must be good and relevant training by the experts in the field.

Police should be made accountable to be more responsible. They themselves should prevent any commission of domestic violence after getting any complaint in this regard and arrest the violator of protection orders being only cognizable and non-bailable offence under the Act.

For effective implementation of the Act, the Lady Police should deal with these types of cases so that aggrieved persons can be comfortable with them and explain all their grievances to them. It is also advisable to establish some all-women Police stations especially in the underdeveloped areas to make it easier for women to approach them. In those Police stations, women can discuss their problems, which they would have hesitated

to tell male Police. All Police stations should have a Women Helpline for distress calls from women and children. These Helpline centres should have counselling facilities staffed by the professional counsellors.

Special legal aid cells should be established in all Police stations to provide free legal assistance to the aggrieved persons immediately and they can be prevented from clutches of the unscrupulous lawyers. Moreover, few lady sub inspectors must be specifically assigned to take care of these matters coupled with other women issues. Police must be specially trained to deal with women in a respectful and courteous manner; for handling delicate issues carefully and conscientiously; to improve their image and instil confidence in people regarding the Police; to be sensitized to treat such cases seriously; and for handling such cases with promptness and carefulness.

There should be sufficient number of dedicated and highly educated protection officers e.g. at least one in one or two Police stations and service providers to perform their requisite functions so that Police officials need not be overburdened with these functions. Some of these functions are getting the aggrieved person medically examined or sending her to the shelter homes or guiding her for getting rights and reliefs under the Act etc. Further, Police officials shall have more time to do other requisites under the Act with efficiency. Presently, there is a complete lack of coordination among different functionaries under the Act. Therefore, the urgent need of the hour is to improve the interaction and

40 Section 11 (b).

coordination between them to implement the law in true sense.

In addition to these functionaries, in each Police station one female Head Constable is to be appointed as the contact person only for the aggrieved persons as Police station is the first place where they can reach easily. Such staff would coordinate between the Protection Officer and the aggrieved persons in filing cases etc. and in the meantime provide all possible immediate help to them. If needed, she can be assisted by one male constable to specifically perform this task.

Conclusion

The role of Police has become very pertinent in the context that the implementation of the Act is inconsistent across the country. Further, the absence of Protection Officers and service providers even if they are available, unawareness about them and negligible state-provided infrastructure make the aggrieved persons heavily dependent on the Police. It also increases responsibility on the shoulders of our Police officials who are already very overburdened. Here comes the issue as to how to balance these responsibilities. The Police official had already proved many a time that they can perform certain duties in the best way even if they are not supposed to perform that. The recent example is their behaviour, courage and sensitivity during the lockdown period in the country and afterwards during the whole pandemic of COVID 19. All of us have witnessed those activities and humanitarian face of the Police leading to the only conclusion that they are saviours of people in need.

But the question arises as to why they behave in a particular manner when it comes to the issue of implementation of the Act. The answer can be that there are some genuine problems but some issues of mindset also create problems while performing their duties under the Act. The large majority of Police officials treated domestic violence as a family matter and did not want to interfere in it. Some of them opined that elders of the family could control it by supporting their 'Bahu' (daughter-in-law). It may be due to the fact that earlier the family was considered to be distinct and separate from law and its entry was prohibited in the domain of family. Therefore, the Police officials are conditioned in that perception and continue with it by upholding the institution of marriage and family.

The Act has expressly provided that the concerned Governments should provide periodic trainings to the Police officials in order to sensitize them regarding the issues related to the women in general and about the Act in particular. But the Government has not been providing any periodic training. Further, most of the Police officials did not know about the various provisions of the Act under the belief that it was to be taken care of by the protection officers and the Courts. A proper and special training should be given to them so that they can have proper knowledge of the Act to effectively implement it.

The Police officials are not trained enough to deal with the kind of violence inflicted upon women. It is true that Police also have not been provided with any special training to deal with

these cases. Further, they think that it is the responsibility of only protection officers to deal with these cases. The apathetic approach of the Police aggravates the sufferings of the aggrieved persons and creates major hurdles in getting timely and required justice to them. The Act has suggested a new role for Police as the saviour of victim but as they are not specifically trained, they perceived their roles as imposing punishments only.

It is apt to say that the Police should perform the role which has been assigned by the Act to them that is of saviour of the aggrieved persons. However, this fact cannot be ignored that Police are facing many real issues like insufficiency of Police personnel, heavily overburdened, clubbing of functions of investigation and maintenance of law and order, lack of proper training etc. Therefore, it is difficult for them to perform the complete expected role under the Act but at the same time they must change their mindset with reference to the aggrieved persons under the Act and help and guide them as much as possible for them and then refer them to other functionaries like protection officers under the Act for whatever is necessary. They

should deal with women in a respectful and courteous manner and try to console them during their difficult times. We know that the Police personnel can do it as they have done during the lockdown period in the country. We hope to see the same humanitarian and compassionate face of Police while dealing with the aggrieved persons under the Act.

Reference

Primary Source

The Protection of Women from Domestic Violence Act, 2005

The Protection of Women from Domestic Violence Rules, 2006

Secondary Source

Ahuja, Ram (2012), *“Research Methods,”* Rawat Publications.

Kothari, C.R. (2005), *“Research Methodology, Methods and Techniques,”* New Age International Publishers.

Singh, Y.K. and Bajpai, R.B. (2008), *“Research Methodology: Techniques and Trends,”* APH Publishing Corporation, New Delhi.

The Indian Police Journal

Volume 68, Number 1, ISSN 0537-2429

January-March 2021

Note for Contributors

The Indian Police Journal (IPJ) is the oldest police journal of the country. It is being published since 1954. It is the flagship journal of Bureau of Police Research and Development (BPR&D), MHA, which is published every quarter of the year. It is circulated through hard copy as well as e-book format. It is circulated to Interpol countries and other parts of the world. IPJ is peer reviewed journal featuring various matters and subjects relating to policing, internal security and allied subjects. Over the years it has evolved as academic journal of the Indian Police providing critical inputs to the stakeholders of policing and internal security.

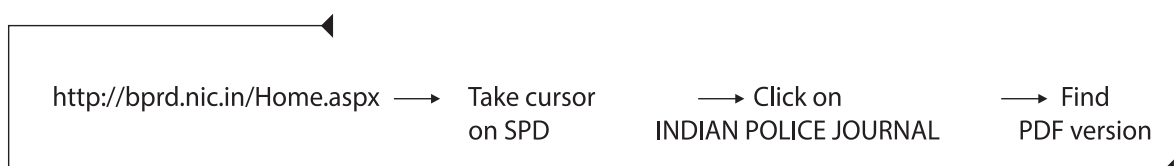
How to submit Article/Paper

The paper/article on crime, criminology, general policing, internal security, forensic science, forensic medicine, police organization, law and order, cyber crime, organized crime, white collar crime, crime against women, gender policing, juvenile delinquency, human resource development, police reforms, organizational restructuring, performance appraisal and service delivery, social defence, police family, police housing, police training, human rights, intelligence, corruption, terrorism and counter terrorism, community policing and allied subjects can be submitted.

The paper/article with keywords and abstract should be between 2000-4000 words. The paper/article should be original and have not been published in any journal. A brief detail about author should also be submitted. The paper can be submitted through email: vijenderkumar@bprd.nic.in.

The paper/article can also be submitted via post with a hard copy in duplicate and a CD on following address. **The Editor, The Indian Police Journal, BPRD, MHA, New Building, National Highway-8, Mahipalpur, New Delhi-110037**

FLOW CHART TO DOWNLOAD JOURNAL ONLINE





BUREAU OF POLICE RESEARCH & DEVELOPMENT

Ministry of Home Affairs, Government of India
NH-8, Mahipalpur, New Delhi - 110037

OfficialBPRDIndia



BPRDIndia



Bureau of Police Research & Development India



bprd.india



www.bprd.nic.in

Jaina Offset Printers: 9873149889, 9811269844

Volume 68 | Number 1 | ISSN 0537-2429 | January-March 2021