



# **The Indian Police Journal**

Volume 67, Number 3, ISSN 0537-2429, July-September 2020

**'Promoting Good Practices and Standards'**

# The Indian Police Journal

Volume 67, Number 3, ISSN 0537-2429

July-September 2020

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**IPJ**

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# EDITORIAL MESSAGE

The Indian Police Journal has come a long way since its first edition published in year 1954. Over a period of more than six decades, IPJ has carved a niche in the police fraternity covering myriad stories on numerous vital subjects on which the Indian police force works.

With collaborative endeavours, the Indian Police Journal has had a great time enriching the reader with well researched articles on contemporary policing, administrative, forensic, HR and police related technical issues. IPJ has been striving hard to promote citizen centric police services as it is widely known to police professionals, forensic practitioners, research scholars, academia, management communities, non- government organization and in the field of correctional administration.

This edition compiles numerous articles that help the reader know various facets of police work culture. "Technology and trafficking in persons", the writer has shed light on the fact that trafficking in persons is an "organized crime, a continuing crime, and a basket of crime." further writer explains in his article how traffickers are using technology to promote their business and trafficking for commercial sexual exploitation. He has well explained trafficking in persons for forced labour.

The article on "Gender Issues in policing : perspectives and perceptions" has shown a profound insight into the roles, challenges and perception of women police personnel and gender issues around them. The writer has highlighted the status of women in police in the scenario prevalent.

The article on "Illustration through forensic examination of recruitment scam case" by Pranay Bhardwaj has categorically underscored certain aspects emphasizing how recruitment agencies are adopting an online recruitment process for employment of various staff for various posts in order to maintain the equilibrium between need and demand.

The article on modern theory of punishment- an analytical study by Dr Caesar Roy elaborated on various theories of punishment such as deterrent theory, retributive, preventive, reformative and expiatory theory.

The article on 'window registry forensic analysis' written by Priyanka Tomar focuses on how to solve any cyber crime and how investigation plays a vital role in detecting crime.

Besides, IPJ time and time again delves deep into numerous modus operandi employed by certain gangs operational in a particular area where they are familiar with topography and factors suited for that crime.

I make a special mention of Bawaria crime in Tamilnadu, a piece well documented by SR Jangid IPS. This talks about robbery in the houses located along the national highways from Gummidipondi -Chennai- Bangalore. Use of firearms and steel rods, looting of jewels and cash and electronics goods. How the gang does a quick and thorough recce of the targeted area before commission of crime.

The article on “victim-offender relationship and post traumatic stress disorder in incarcerated murderers” cannot be overlooked, this article further explains that crime is an anti- social behaviour and is directed against certain fundamental values. In the criminal justice system, researchers and social scientists have long been interested in murder and murderer. This piece speaks of the remedy of such crime.

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 certain reasons for and causes of stress among the uniformed personnel. Above all, the ways and means suggested addressing these grave issues under police personnel commands.

**Editor in Chief**



drastically increased in the recent days. As the fastest growing illegal industry in the world, the sex trafficking has become technology intensive. Traffickers are liberally using the Internet and technology for increasing demand, concealing identity of the 'customer', concealing money trails, and camouflaging the victim too, oftentimes giving misleading information to trap 'customers'.

**Using online platform to deceive or lure vulnerable victims** is a major aspect of cyber traffickers. They use fake IDs especially on social media and stalk girls who are vulnerable to trafficking. Selection is done very carefully and cleverly. The spotters go for people who are alone, children who are not cared for by their parents or guardians, girls who are interested and are eager to migrate and join glamorous vocations like those in the film industry, and adolescents, both men and women, who are excited and interested to exhibit their talents such as sports, dance, music, comics and other cultural activities etc. Using the online platform, the traffickers, start interacting with them as job providers, manpower agencies, or agents who connect them with the concerned industry, etc. The icebreaking part is skilfully done till the trafficker wins the confidence of the client. Generally speaking, the activities can be categorized as follows: trapping victim; promoting demand; controlling victims; transferring funds and concealing activities. Once they gain the emotional trust of the victims, they will entice, lure or coerce them to leave their homes. Thereafter it is the trafficker who calls the shots, as the girls will be under their command and control. More often, this results in the girls being sold to brothel owners or other sexual predators.

### **FACILITATING THE 'BUSINESS' OF SEX TRAFFICKING USING TECHNOLOGY**

Most of the traffickers play up the fancy of the 'customers' by highlighting the comfort level, happiness level, safety of health and hygiene easy transfer of funds, anonymity etc. Technology comes very handy for advertising the picture.. Technology is used to exhibit as well as camouflage

the pictures of the girls, to bargain on high cost for providing girls, contact the customers, fixing appointments to meet with the clients, booking hotels, transportation of the girls to the area of demand, and bringing them back to their place of stay. In fact, some traffickers use private social media accounts and a few of them have their own websites and chatrooms to sell girls online. In some cases, the traffickers use webcam services to sell girls.

One of the emerging crimes in the cyberspaces is Online Sexual Exploitation of Minors. The predators connect with the traffickers, to buy the children and make them do online sexual acts as well as develop child pornography. The online predators from different parts of the world join the call; watch the exploitation of the child, who may be located in another country.

Due to Covid lock down, children and adolescents who are 'locked down' at homes have started liberally using the social media without any knowledge of the security aspect and without skills to ward off phishing mails and pictures. Therefore, vulnerability has gone up tremendously during the Covid lockdown. The inability of the youngsters to share their miseries with peers and teachers has made the children more frustrated.

The liberal use of social media by children and adolescents, who are not properly oriented and skilled, cause & colossal damage to them, even though it remains unnoticed for long. Lack of knowledge of the security risks, lack of awareness of the phishing, wishing and smishing methods used by traffickers, lack of guidance by experienced persons are some of the serious issues that affect millions during the Covid lockdown phase. Most of these children are not able to share the issues with parents due to the cultural issues or the generation gap. They are not able to share with peers and teachers also, who used to be their safety valves earlier, but not so now due to lockdown, especially because of the loose contact or lack of direct contact with them. The children suffer in silence and this adds



to the 'pressure cooker syndrome', as described by UNICEF. The frustration and depression is going to burst sooner than later and that will be a calamity. Therefore, this issue needs attention by all concerned, especially the parents, teachers and mentors as well as law enforcers and policy makers.

### **CONTROL OF VICTIMS USING TECHNOLOGY**

Another significant aspect of the process of trafficking is the power and authority that the traffickers exercise over the victims. In fact, trafficking is, in simple terms, an extreme form of violence. It is a display of authority and power by the powerful, over the weak. In order to run the show, the traffickers have to retain the position of power and for this they adopt several techniques. Many traffickers install GPS software or the location tracking mobile applications in the victim's phones and monitor the movements of the victims. The victims are instructed to travel only to certain locations and defined distance. This is closely monitored by the traffickers. If any of the victims travel beyond the defined location, the traffickers contact them, warn/threaten/intimidate them with dire consequences.

Instances are plenty where the young girls were deceived, lured and forced to be part of the 'sex work' only for a few months and that then they were able to return to their normal life with huge profits. During the period, they were under full watch using technology. Often videos of the girls being raped or sexually exploited were taken and used for blackmailing them with the threat of sharing the images with their family or close friends or putting them on social media.

### **TRAFFICKING IN PERSONS FOR FORCED LABOUR**

According to the International Labour Organisation (ILO), 14.2 million people are forced into labour exploitation globally. Recently, in India, labour trafficking is on the rise due to the increase in demand in the construction of buildings and other infrastructures. Due to

increased demands and migration for labour, the traffickers are making more business out of them. In order to meet the demands by the employers, the traffickers use technology to lure, hire, move and control the victims of labour trafficking.

### **Metamorphosis of "Migrant" to "Bonded" to "Trafficked":**

Many traffickers work under the facade of a manpower agency or placement agency. They create advertisements and post them online to lure vulnerable victims. The traffickers also use online messenger services to send bulk messages across the State with exciting offers such as high salaries, place of stay, free food, etc. The common victims for these predators are unemployed youth and the poor. The migrants are part of the system. Human beings have a right to migrate. Depending on the demand, the migrants move to places of work. Human contractors facilitate this movement and in that process they may make money. However, the story is not that simple. There is conscious effort across the country to make the migrants bonded. Different mechanisms are adopted. Some of the contractors extend advance payments, which may be huge sum from the perspective of the migrants, usually amounting to their wages for two to three months. The migrant is happy with the contractor but does not realise that this is a trap. Most of the migrants consume this either before journey or soon after arrival. Thereupon they need to borrow from the contractors or the proprietors for survival. The contractor is only too willing to lend money so that they can keep the labour further bonded. This bondage gives the contractor an open visa to exploit and command the labour. Often times, the labour is made to work beyond regular duty period. Holidays are never allowed. Instances are plenty where the wife and children are asked to supplement the work of the labour. All these 'additions' are done at no extra payment and only on the ground of the huge bondage. Thus the 'migrant' who had moved to become "bonded" now becomes trafficked. This metamorphosis is smooth and steady that even the labour does not realise. Technology provides

the appropriate substratum. Money transactions are recorded on WhatsApp messages and deleted after the purpose, and no regular documentation is maintained, as they would become incriminatory. Technology is usurped to conceal the crime trails.

Technology is used to further the cause. Once the labourers are transported and handed over to the owners, the traffickers delink their relationship with the labourers and hand them over to the proprietors to exploit, almost like buying and selling cattle. The bondage persists in the account of the bonded but the owner changes. Technology helps with this transfer.

The world of technology integration in the crime continues unabated. Migrant workers are monitored and controlled through Video surveillance cameras. Victims are under constant watch and are made to work under the threat of video monitoring. They are forced to give high outputs under duress. Videography is used as the medium for coercion and slavery.

#### **TRAFFICKING IN PERSON FOR ORGANS:**

Organ Trade is as serious as other forms of trafficking, yet the visibility of the crime is limited essentially because of the complete synthesis of technology in the process of recruitment, movement, exploitation and payments. This is exacerbated by the ingenuity of the high-profile stakeholders such as medical professionals, organ traders, agents, pharma companies and even law enforcement agencies, who, often, works in complete unison with traffickers, sellers, and buyers. Technology keeps them hidden from public view, public scrutiny and thus provides impunity too.

#### **USAGE OF TECHNOLOGY IN TIP - POST COVID19 SCENARIO:**

COVID-19 pandemic has brought in radical change in the lifestyle of everybody. One visible impact is on the tremendous change in the way people use the internet. Shockingly, as one report shows, people watching pornography has increased in India. During COVID-19 pandemic lockdown, India

has reported 95% increase in the adult sites watch<sup>2</sup>. This shows the rapid increase in the demand for sex on the online platform after pandemic. Since the demand for child pornography has increased drastically, the child porn makers and sellers are making brisk business. Child porn development simply means that some child is exploited somewhere and is violated physically, sexually and emotionally. Therefore, the high demand for child pornography is a clear testimony to the corresponding increase in exploitation of children in developing pornography. The entire act of filming, video recording, developing, transferring, etc. are all technology driven with almost nil scope for detection by the ordinary law enforcement officials.

**Increasing demand for online abuse:** It is estimated that in India 200 million children are staying at home as more than 1.2 million schools are closed. Since children are at home, abusers use this opportunity to exploit them. Usually children tend to talk and share about the abuse with parents or the teachers. Often children seek help from the teachers and through them, the help of law enforcement officials and child welfare officers<sup>3</sup>. A study by India Child Protection Fund (ICPF) shows that more than 5 million people in India searched for child porn on the websites<sup>4</sup>. The Porn hub, the largest Pornography site mentioned that there are high searches on the keywords such as Child Porn, Sexy child, and Teen sex videos. Most of the child pornography viewers are interested in generic child sexual abuse materials involving schoolgirl's sex. Almost 18% of the individuals exhibited explicit intent for videos where children were choking, bleeding, tortured,

2 Pornography gets a pandemic boost, India reports 95 per cent rise in viewing - <https://www.indiatoday.in/news-analysis/story/pornography-gets-a-pandemic-boost-india-reports-95-per-cent-rise-in-viewing-1665940-2020-04-11>

3 Schools shut, Unicef working with Indian govt for alternative ways of learning <https://www.hindustantimes.com/india-news/schools-shut-unicef-working-with-indian-govt-for-alternative-ways-of-learning/story-QzWqAmeCCvbKJXCVDjvWdP.html>

4 <https://timesofindia.indiatimes.com/india/icpf-report-warns-of-sharp-rise-in-demand-for-online-child-pornography-during-lockdown/articleshow/75127399.cms>

in pain or screaming<sup>5</sup>. The increase in perversity and violation is another disturbing factor. This can lead to further aggression and violence when the lock out is lifted. The fact is that Covid lock down has provided a safe haven for child traffickers and child pornographers. This drives home the point that children are more vulnerable for online predators now, than ever before.

### **TECHNOLOGY IN PERPETRATING EXPLOITATION:**

According to Corporate Responsibility in Eliminating Slavery and Trafficking, during the COVID-19 pandemic situation, more than 164 million migrant workers' are pushed into most vulnerable conditions<sup>6</sup>. In India. Millions of migrant workers were severely affected by this pandemic lockdown. The issue of migrants' condition and their desperation to return to their native States were projected on all forms of media. The lack of coordination before the source and destination states was quite obvious, amply demonstrated by the perils that the migrants including women and children had to face. The untold sufferings have caused colossal harm and damage to these hapless persons. There is one more dimension to this. The hidden world of bondage that is awaiting them going to break the back of the migrant. Most of these migrants have made heavy borrowings to meet the crisis. Further, as per the government order, the employers were made to provide food and shelter without work during the pandemic. All the money spent on the migrants by the employers is cleverly documented by most of them and once the pandemic situation gets over, these employers will connect with the contractors to ensure that these migrants are tracked back to their old facility and therefore they will be forced to work.

### **TECHNOLOGICAL PLATFORMS AVAILABLE TO ADDRESS/REDRESS TIP:**

- 5 ICPF report warns of sharp rise in demand for online child - <https://timesofindia.indiatimes.com/india/icpf-report-warns-of-sharp-rise-in-demand-for-online-child-pornography-during-lockdown/articleshow/75127399.cms>
- 6 COVID-19 places migrant workers in highly vulnerable situations - <https://crest.iom.int/news/covid-19-places-migrant-workers-highly-vulnerable-situations%C2%A0>

Human trafficking is a global issue, affecting almost every country in the world. More than 40 million people are victims of human trafficking in labour, commercial sexual exploitation, and organ trafficking. By taking advantage of the available technology, when the human traffickers are shifting their modus operandi to the online platform. It is essential and imperative that the persons and organisations working to prevent and combat human trafficking must be aware of these developments and must adapt to this situation by using technology to break the human trafficking networks. There is a need to utilise the development in machine learning, Artificial intelligence, Blockchain and all new forms of technology to combat the crime before it becomes too late.

Several organisation and tech industries across the globe and in India too, have joined the fight against human trafficking. Anti-human trafficking organisations and technology companies who are interested in fighting the crime, have developed several technologies not only to identify the victims and traffickers, but also understand the strategies and tactics of the traffickers and break their networks. Technology has also come in hand to help protect and save the victims from being trapped. Some of the technology developed in the recent past and considered useful is discussed below.

- a. **Red Alert: A My Choices** Foundation developed a system which can help in identifying vulnerable villages by collecting publicly available socio-economic data on source areas, analysing them and then prioritising them for interventions. MCF shares it with NGOs and facilitates the community members to send 'Rakshaks' for rescue to the hotspots. MCF has been working in this platform with good returns. (<https://www.facebook.com/RedAlertMCF/>)
- b. **G-Power:** This tool developed by CINI ASHA, based at Kolkata, captures data for 'source areas' based on social parameters and with

predictive algorithms. The data is used to identify the challenging areas and persons especially girls who are likely to be trafficked or exploited. Based on these parameters, they are further classified as "Most Vulnerable, Vulnerable and Not vulnerable". This helps the NGOs in deciding the course of action, with immediately reaching out to the most vulnerable. (<https://www.cini-india.org/news-and-press/cinis-g-power-project-gets-featured-in-some-of-the-leading-web-medias/>)

**c. Companion Chat:** It's a chatbot, developed in India, that asks potential victims accessed by NGOs about their conditions and circumstances. Using natural language processing for sentiment analysis and keyword extraction on the responses, it brings out the actionable indicators. There upon these are utilised by the concerned agencies for appropriate follow up action, including counselling services and facilitating justice delivery.

**d. Project Intercept:** Seattle Against Slavery's integrated platform tools help in posting decoy victims, trap buyers and thereby prevent CSE with the help of Chatbot and advertisement scraper. (<https://www.seattleagainstsavery.org/>)

**e. TrafficCam:** Exchange Initiative, agency based in USA, helps to crowd source a large data set of images of hotel rooms, and then analyse them with cross-reference images related to trafficking crimes. (<https://traffickcam.com/about>).

**f. Traffic Jam:** By indexing online commercial sex advertisements selling sexual services, Traffic Jam uses Artificial Intelligence for facial recognition in order to identify victims of trafficking. (<http://traffickjam.org/>)

**g. Analyze:** US based company Analyze has developed a full suite for digital investigations

into hash tags (unique identifiers) of known child sexual abuse material (CSAM) found on the internet.

**h. Photo DNA:** Developed by Microsoft, Photo DNA aids in finding, indexing, and also on removing known images of child exploitation. The system has been effectively used by several agencies including law enforcement agencies. (<https://www.microsoft.com/en-us/photodna>)

**i. Friends MTS F1:** This is a technology to create a unique digital imprint of video clips that are deemed to be illegal or offending. These digital 'fingerprints' are of use to the law enforcement agencies to locate and even remove child abuse images from the internet. (<https://www.friendmts.com/>)

**j. Domain-Specific Insight Graph (DIG):** DIG is a search and analysis system to collect and analyze data from open source websites containing child sexual abuse material (CSAM). It was developed under the MEMEX program, led by the University of Southern California's Information Sciences Institute. Cyber Peace Foundation India is trying to link this up with the Indian agencies. (<https://usc-isi-i2.github.io/dig/>)

**k. Spotlight by Thorn:** This is a technology that aims to improve the effectiveness of domestic sex trafficking response, with updated database on the number of women and children identified and provided with assistance. (<https://www.thorn.org/spotlight/>)

**l. Deep Dive:** By indulging in deep search (usually termed 'scrapping') through web advertisements that contain CSAM, this helps in generating credible intelligence about traffickers and trafficking activity and accordingly facilitates the process of interventions. (<http://deepdive.stanford.edu/showcase/memex#:~:text=DeepDive%20is%20a%20tool%20for,and%20help%20>

[human%20trafficking%20victims.](#))

**m. Hunt Analysis & Locate Traffickers (HALT):** By using IBM i2 for intelligence gathering, this system helps to detect and investigate CSEC cases and is utilized by several agencies in US. (<https://securityintelligence.com/events/how-deliverfund-is-using-i2-and-the-target-centric-analysis-method-to-fight-human-trafficking/>)

**n. Traffic Analysis Hub:** IBM and STOP THE TRAFFICK have launched this data intelligence hub which identifies human trafficking terms, terminology, code words, chains, and other subtle aspects of financial transactions done in collaboration with partners across the United States. The tool has been useful in tracing money laundering. (<https://www.stopthetraffik.org/what-we-do/traffik-analysis-hub/>)

**o. iGAT:** Built in India, iGAT, Intelligence Gathering And Tracking, is a digital investigation software designed to assist in identifying and analyzing CSEC data from open source sites on the web. Developed by BLACKTRONICS Labs, it helps in plotting locations of calls, in website analysis and in gathering intelligence from social media. (<http://www.blaktronics.com/igat/>)

**p. Sex Trafficking Operations Portal (STOP):** This is a portal for law enforcement that scans the internet for online ads like escort services and other demand / solicitation messages for sexual exploits. The software helps delete unnecessary meta information from the ads, and thereby makes them available to the responder for viewing, without clutter, and follow up action. ([https://www.norc.org/Research/Projects/Pages/sex-trafficking-operations-portal-stop.aspx#:~:text=The%20application%2C%20called%20 %E2%80%9CSTOP%E2%80%9D, enforcement%20officers%20or%20their%20designates\).](https://www.norc.org/Research/Projects/Pages/sex-trafficking-operations-portal-stop.aspx#:~:text=The%20application%2C%20called%20%E2%80%9CSTOP%E2%80%9D, enforcement%20officers%20or%20their%20designates).))

**q. Victim Case Management System (VCMS):** Developed by Liberty Sharad, Hong Kong, this facilitates a systematic recording of information of the victims including the process of trafficking nature of exploitation etc. It facilitates decision making by outlining clear goals and tasks on appropriate rehabilitation and financial status (including access to related training). VCMS with a network of 60 NGOs, is active in 15 countries including India. (<https://www.vcms.app/>)

**r. Impulse Case Information Centre:** This system records details of each instance of trafficking from start to end and follows all issues and activities sequentially from rescue till reintegration. Developed by Impulse NGO Network in India, it is operational in all the North Eastern States in India. Impulse network has linked the platform with not only civil society agencies but also police agencies. (<https://www.impulsengonetwork.org/our-work/impulse-case-management-centre/>)

**s. MCA (Missing Child Agent):** This is a platform developed during 2015-2016 by PLAN International. The issue of missing children and a huge backlog of them not being traced was and is a serious issue in India, Bangladesh and Nepal. This project brought out a technological platform, MCA (Missing Child Alert) to link up the data of the three Nations and coordinate the response. MCA was not only a database, but was conceived to provide actionable intelligence and had scope to link up with other systems like facial recognition, etc. whereby tracing the missing children would be easy and fast. However, PLAN could not link it up with the governments and, therefore, the platform, though well developed, is yet to be put on ground.

**t. Repatriation Information Management System (RMIS):** PLAN International, starting with the MCA (Missing Child Alert) has moved to RMIS tool, which is a web-based,

real time tracking mechanism, which helps to coordinate cross-border repatriation of child victims of trafficking, between India and Bangladesh. The platform has been developed by Dnet, Dhaka.

**u. Technology in locating Missing Children (Track the Missing Child and Khoya – Paya of Government of India):** These are technology linked systems developed by the Government of India to locate and rescue missing persons, especially children within the country. The adoption rests on the data sharing and utilization by the different States in India. Despite challenges, the systems have come to a stable level and are operational, delivering good results. (<https://services.india.gov.in/service/detail/national-tracking-system-for-missing-and-vulnerable-children>) and <http://khoyapaya.gov.in/mpp/home> )

**v. Video Conferencing in the Court Trial of Crimes:** The victim of human trafficking goes through insufferable issues such as physical abuse, sexual abuse, emotional abuse, threats to life, confiscation of victim's properties, threats to disclose the parent's details or share their secret photos online. When they are rescued by the Law Enforcement agencies, and brought to testify against the perpetrators, the victims are scared and intimidated. Knowing that the perpetrator could inflict so much of pain and cruelty, several victims are afraid of speaking out the truth, as it can go against the offenders. In order to reduce the intimidation of the perpetrators, the trial court in Mumbai along with the other stakeholders undertook video conferencing with Nepal and Bangladesh. These cases ended in fast, smooth proper disposal. Here is a case of technology integration in the trial of offences in the court of law. This was the first time when victim was located abroad, when trial was conducted in India. This is indeed a case of court reaching out to the victim, thanks to the technology integration.

The High Court of Maharashtra utilised the services of P. M Nair and he, in collaboration with International Justice Mission and Justice and Care, brought out an SOP on "Video Conferencing in the Court Trial of Crimes". This drastically reduces the physical, emotional and financial strain on the victim. Further, the process of justice delivery is expedited. Since the proceedings were recorded on the Video conference<sup>7</sup>, the legal process was fully accomplished too. Indeed technology can be of great use even in dispensing justice. The SOP is a guide book for all stakeholders to know their tasks, roles and responsibilities. (<https://www.ijmindia.org/courts-introduce-video-conferencing-to-accelerate-proceedings>).

#### **THE WAY FORWARD:**

Every country in the world is affected by human trafficking and no country is immune to this issue. Human trafficking is one of the borderless issues which needs borderless solutions. This means every country must come together, join hands, exchange best practices, exchange technologies, and implement certain strategic plans to eradicate human trafficking. Here are a few requirements arising out of the problems and challenges on ground and based on the analysis in the earlier paragraphs.

#### **a) International Protocol to Combat Human Trafficking**

It is well accepted that the United Nations Convention Against Transnational Organised Crime and the Protocol thereto of 2000 has helped the nations across the globe to come together in combating the organised crime. Twenty years down the line, since technology and internet have been completely integrated with crimes and criminals, it is imperative that the response system also become technology-driven, technology-oriented, technology-facilitated and technology-integrated. As of today, several countries are facing problems

7 Booklet on Video Conferencing in the Court Trial of Crimes by International Justice Mission.

for transfer of evidence and even collection of evidence from other countries, especially due to the fact that the laws of the country do not facilitate such transfer. Often, the integration of technology in evidence transfer has not been accomplished in the statutes. There is a need to bring the whole world together in this mission of technology integrated response. This can be made possible if there is an international protocol that would be binding on all Nations. UN needs to take the initiative. It could be titled International Convention on On-line Sexual Abuse and Technology-linked Trafficking in Persons. It is time that United Nations considered this as a priority issue and came up with a Convention/Protocol.

**b) Convergence of existing Technologies**

Nations have adopted different types of technology to combat the various aspects of the organised crimes of human trafficking. Technologies are used in protection, prevention, identification, rehabilitation, and intelligence gathering etc. Most of these technologies, though issue-based and localised are tested and proven among the countries. They remain as islands of excellence. The International bodies like UNODC and UNICEF could identify, document, evaluate such technologies and thereupon share them with all concerned across the borders. Convergence plays a major role in combating any crime. Let the excellent initiatives be linked and put to the best use and benefit of all concerned. Technology can be easily adopted with fine tuning, depending on the local systems.

**c) Collaboration of Technology Companies with Law Enforcement**

To develop advanced technological solutions,

technology development companies should join hands with the law enforcement agencies. Skill plus knowledge will make this act formidable. There are several systems of technological integration in response to trafficking, as discussed above, but mostly confined to civil society. They need to be converged with government systems thereby making more potent and powerful.

**EXCHANGE OF BEST PRACTICE MODELS**

The best innovations and best practice models should be adopted and implemented across the globe. The nature of crime differs from sectors, regions, culture, ethnicity, language and country. There are high possibilities that the technology which are developed in other regions might not be applicable for other regionals or may not be implemented effectively. Therefore, the innovation, and best practice models should be personalised based on the sectors, regions, culture, ethnicity, indigenous and techniques must be included for the best and effective implementations. Agencies like BPRD could commission services of experts and expert bodies like Research Agencies and bring out a compendium of good practices

**LAW ENFORCEMENT AND SOCIAL MEDIA PLATFORMS**

More than 2.5 billion people around the globe are using social media, but many among them are not even aware of the crimes happening in the social media platform. It is the responsibility of the social media platforms and service providers to protect their users from the online predators. The social media platforms must join hands with the local Government, Law enforcement officials in exchanging information about the crimes on social media and take necessary steps in ending these crimes.

# Systemic Corruption; Economic Growth and Limits of Conventional Anti-Corruption Approach: A Case for Sectoral Approach in Developing Countries



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

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## ABSTRACT

This political economy approach based study argues that in order to control corruption there should be demand for the same from the forces that can influence policies of the state; and that the state should be able to bear the costs of corruption control. Developing countries due to their less competitive organizations that predominantly rely on illegal rent seeking and nefarious patron-client arrangements face the problem of no demand from the powerful for corruption control. Similarly, weak institutional arrangement and commitments of the developing countries for socio-economic and political transformations make them incapable of bearing the costs of efficient anti-corruption enforcement. These constraints incapacitate the conventional anti-corruption approach that aims at controlling corruption across the board in developing countries. It is argued that developing countries can adopt growth oriented corruption control approach, aiming at increasing the competitiveness of sectors that promise high growth, which in turn will be capable of generating demand from the powerful for corruption control.

***(Key terms: Systemic corruption, conventional anti-corruption strategy, sectoral approach)***

## INTRODUCTION:

Though there are divergent views about the content of the term corruption, its common understanding could lead one to appreciate that corruption occurs when authority is misused by those who are in power for personal gain (World Bank, 1997). While various theoretical approaches tend to explain the causes and consequences of corruption from different perspectives, public policy understands corruption in a very narrow sense of issues associated with governance. According to governance literature, for an act to be qualified as corrupt there has to be misuse of

the entrusted power for private gain, of course, by the authorities that enjoy discretion in exercising their power. Misuse or abuse of authority can be the cause of or result of corruption. Different actors that have the authority to exercise discretions can operate at different levels; and this can lead to a range of abuses even in a single transaction, making understanding the corruption phenomenon complex.

Also the motive for abusing the discretions can vary depending upon the outcome expected by corrupt actors in their deal. It can be for

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## Author's Intro:

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pecuniary or non-pecuniary benefits (OECD, 1997). Depending upon the power the authorities enjoy, abuses can range from jumping the queue to tailor the legislations (DID, 2015) for favouring private players. The authority so abused gives rise to different categories of corrupt behaviours. Demand versus supply side corruption; petty versus grand corruption; public versus private corruption; systemic versus individual or isolated corruption etc. are the broad categories that help to understand the varieties of corrupt deals. Essentially, the degree of coercion used; nature of the abuse; the range of actors involved; and outcome expected in corrupt transactions help to understand the different categories of corrupt arrangements (Deloitte, 2014).

But, whatever be the form, corruption has been understood to be detrimental to growth (Wang & You, n.d); and there are studies showing negative correlation between corruption and development (Gründler & Potrafke, 2019). In their study conducted across 142 countries Cieslik and Goczek (2018) found that corruption was negatively impacting economic growth. Studies of Swaleheen (2011) and D'Agostino (2016) also produced similar results. Still, contrary to the commonly understood effects of corruption on economic development, the famous Asian paradox experience shows that corruption can have growth promoting effects. In China, Indonesia, Thailand and South Korea corruption has been found to be significantly promoting growth (Rock & Bonnet, 2004).

But, while recognizing the Asian paradox phenomenon, Wang & You (n.d) found regional variations in the growth enhancing effects of corruption. In other words, the growth enhancing effect of corruption is uneven across regions. Wang and You further argue that this positive effect of corruption on growth is transitory; and that sustainable growth requires well-functioning institutions. Incidentally, China, Indonesia, and Korea do not have good scores over the years on various indices of governance while maintaining

high growth rate (OECD, 2018). But, barring these few Asian examples, in most of the developing countries corruption has been found to be impeding growth; and recognized as a governance challenge. There are studies indicating the pervasive nature of corruption distorting policy priorities in developing countries. It is true that most of the developing countries have institutional experience in corruption control through their enforcement agencies (Perumal, 2019); and in spite of having anti-corruption measures in place at-least for three decades, most of the developing countries continue to have high incidence of corruption. Many reasons, right from institutional quality to state capacity, have been attributed for the sub-optimal outcome of corruption-control efforts in developing countries. Recognizing the impacts of corruption on economic development, this work attempts to inquire into the factors that cause the conventional anti-corruption approach to under-performing. Essentially, this work seeks to investigate the drivers that impact the effectiveness of conventional corruption control strategies; and the incentive structures that sustain corruption in developing countries.

## LITERATURE REVIEW

Economic development; systemic corruption and developing countries:

The past three decades of anti-corruption research shows that corruption has deep implications on the issues of governance (Javaid, 2010); with an increasing level of development, incidence of corruption comes down (Enste, 2017); and that corruption in developing countries is pervasive in nature (Wigwe, 2016). Accordingly, there are many prescriptions as to what policy should be adopted and which variables the interventions should alter for controlling corruption. Supporters of the idea of good governance that has occupied considerable space in governance already, argue that good governance is a means of achieving development (Chimezie, 2016); and that in order to achieve growth the state should improve the quality of variables associated with governance.

Accordingly, good governance, of which corruption control is an essential component, recommends the states to create strong institutions for controlling corruption as part of their governance agenda. As a step forward, the open government approach takes issues of governance further, compelling the governments to push corruption control agenda through participatory governance (Harrison, et al. 2011). The neo-classical approach driven multinational initiatives like the OECD<sup>1</sup>, UNCAC<sup>2</sup> etc. do attempt to harmonise anti-graft practices across jurisdictions for effective corruption control. The World Bank and donor agencies are concerned about the capabilities of anti-corruption apparatus in developing countries. Many regional initiatives like, the African governance initiative etc. also talk about strengthening the institutions designed for corruption control. In fact, good governance idea dominates the current narrative about corruption control and the anti-corruption interventions across jurisdictions.

But, this convergence of understanding about corruption has not substantively altered the nature of corruption prevailing in developing countries; and developing countries continue to have high incidence of corruption. The efficiency difference in the institutions of developed and developing countries is a well-researched area and evidence shows that developed countries have strong counteracting institutions like police, judiciary, media etc. for constraining those who are in power, whereas in developing countries, institutions are weak and corruption continues to be pervasive and systemic. According to Svensson (2005), corruption is more systemic and rampant in developing countries than in rich countries; and the systemic nature of corruption distorts the governance objectives in developing countries. Systemic corruption is a serious concern in developing countries because, in the environment of systemic corruption, abuse of power; authority

and of public trust cuts across virtually all sectors and institutions (Laver, R., 2014). Nicholls (2011) argues that corruption brought-about, encouraged or promoted by the system itself leads to systemic corruption. World Bank (1997) explains the situation of systemic corruption in more simple terms by maintaining that corruption is systemic where bribery is understood by everyone to be routine in transactions with the government (World Bank, 1997). Where corruption is systemic, the institutions of government that are supposed to prevent corruption also become corrupt (Klitgaard, 2004).

### **DRIVERS OF CORRUPTION IN DEVELOPING COUNTRIES**

Another damaging aspect of systemic corruption is that in systemic corruption, formal rules may remain in place; but, are incapable of breaking the informal behaviours that nurture corruption. Nicholls (2011) also supports this view. Contestable legitimacy of the state in protecting public interest; weak enforcement of rules; absence of rule of law; lack of institutional accountability; inefficient bureaucracy etc. have been cited to be the factors that sustain systemic corruption. The presence or absence of these drivers is the function of the strength of institutions; distribution of power and interest among various groups; presence or absence of discretions in decision making; level of rent seeking; and capacity of the state to bear the costs of rule enforcement explain the capacity of state (Perumal, 2019). Thus, capacity of the state to enforce rules and to bear the costs of enforcement is one of the critical determinants of corruption control. State capacity has an economic growth aspect too. Khan (2007) substantiates his argument that efficient resource distribution comes with certain level of development, by citing the detailed procedures evolved for allocating rents and rent seeking in developed countries. Presence of detailed rules for re-allocating their resources and strong counteracting institutions help the developed countries to have low incidence of corruption. In addition, developed countries are rich enough to bear the costs of rule enforcement.

1 Organization for Economic Co-operation and Development is a multinational organization working on policy assistance.

2 United Nations Convention against Corruption is the only legally binding multinational instrument for corruption control.

But, most of the developing countries have low state capacity and inefficient institutions, apart from undergoing the process of socio-political transformation. The past three decades of anti-corruption campaign have not substantively increased the efficiency and strength of anti-corruption enforcement in developing countries. As a result, enforcement institutions in developing countries continue to be weak and are working in environments which are adverse to their efficiency. Court, et al (2003) provide evidence about weak and problematic governance due to widespread corruption and lack of accountability in sixteen developing countries including Chile, India, China, Indonesia, Bulgaria, Pakistan and Russia. It is also true that corruption in developing countries has historical reasons. Angeles & Neanidis (2010) argue that corruption in developing countries has deep historical roots and that colonialism is of paramount importance for understanding corruption. It has been studied that there is a significant disparity in the distribution of power and resources among various socio economic and political groups in developing countries.

Historically, there is a strong relationship between power and distribution of resources in society. Amundsen (1997) argues that re-distribution of resources follow the distribution of power. This disparity promotes competing interests among various power groups or cliental networks. Cliental networks are not limited to politics; religion or level of development and these networks have been found to be active in every country. But, the level of economic development remains to be a strong determinant of clientalism (Bustikova, 2009; Corduneanu-Huci, 2009) and in weak economic environment cliental networks become more powerful (Khan, 2013). Since, economy and institutions in developing countries are generally weak; the political leadership rely on patron-client networks for maintaining political stability. In other words, patron-client networks serve the leaders to remain in power by assuring political stability in exchange for obligations from the state. In this arrangement, there is a

typical exchange of loyalty and resources which cannot be done formally particularly when the economy is weak (Hicken, 2011). In patron-client relationship, power is arrayed through a system of relations linking rulers not with the ruled; but with patrons, associates, clients, supporters, and rivals, who constitute the 'system' (Jackson & Roseberg, 1982). Nonetheless, developing countries owe the responsibility of creating capable institutions for controlling corruption in order to achieve their developmental aspirations.

The relationship between corruption and economic growth is a well-researched area. Anti-corruption literature shows that countries that score well in governance indicators record an increased growth rate; and with the increased growth there is a reduction in the incidence of corruption. This finds support in the fact that countries with middle and upper income levels show a decreasing trend in the incidence of corruption (Khan, 2013). Such a trend is visible even within a country. In their empirical study conducted across twenty Indian States, Bhattacharyya and Jha (2015) found that in advanced states of India corruption shows decreasing trend and in underdeveloped states corruption continues to remain high. Similar evidence has been obtained in developing countries like Brazil, Indonesia and Malaysia. In other words, the drive for growth has a negative impact on the incidence of corruption in developing countries like, India. Thus, the developing countries in their transition to becoming an advanced country experience a reduction in corruption barring a few Asian countries like China, South Korea etc. It is intriguing that China and Japan have achieved global competitiveness in sectors like Infrastructure, Space technology, Medical Science etc. while maintaining a high growth rate in spite of having a high incidence of corruption. These growth models show that developing countries need to do much in addition to the systemic corruption control measures in place in their respective jurisdictions. Evidence suggests that economic growth is incremental and that the developed countries have made certain specific

interventions like innovation, corruption control etc. in order to improve competitiveness of their organizations over the period of time. Consistent efforts to increase the institutional efficiency and innovation have played a crucial role in economic development in developed countries. Even among developing countries, experience of China, Japan, Malaysia, Singapore and Indonesia show that improving the competitiveness of organizations can assure high growth (OECD, 2018). But, this transitional experience needs to be made sustainable because it is imperative for a developing country to maintain a high growth rate for over a period of thirty to forty years in order to become an advanced country (Khan 2013), and it is quite possible for a developing country to slip down in growth if their policies get distorted by corruption. Thus, it is critical for developing countries to achieve and maintain high growth by not allowing corruption to distort their policy objectives.

### **ANTI-CORRUPTION ENFORCEMENT IN DEVELOPING COUNTRIES**

It is understandable that the relationship between governance, corruption control and economic growth is near similar across jurisdictions irrespective of the level of development; and that in order to achieve developmental goals, governance policy must address these issues together particularly when the neoclassical approach driven good governance agenda has become a policy priority in governance. Here, how has the systemic corruption control approach delivered so far needs careful examination because this approach still dominates the corruption control policy of most of the developing countries (Sousa, 2010). In systemic corruption control, the effect is incremental and this approach aims at controlling corruption across all the sectors. But, this conventional approach has not produced desired results; and no developing country has successfully controlled corruption through this approach (Khan, 2013). Except few developing countries like, Kuwait, Botswana etc. that have abundant oil and diamond resources,

all developing countries show a high incidence of corruption in spite of their anti-corruption enforcement in place for decades.

In fact, initial efforts to control corruption were taken in the post-world war era by colonial powers and by the newly independent countries (Sousa, 2010). While the colonial powers wanted to clean-up their administration in the post second world war period, newly independent countries endeavoured to undo the corrupt practices rooted in their colonial inheritance by creating Anti-Corruption Agencies (ACAs) (Perumal, 2019). But, as argued by Sousa (2010), many of the ACAs have fallen short of the expectations they raised. Works of Jeremy Pope (2000), Heilbronn (2004), Lambsdorff (2007) show that anti-corruption enforcement in many countries remains inefficient. Studies indicate that this conventional anti-corruption approach faces the problem of weak institutional design. Khan (2007) talks about capacity of the state to create strong institutions and to efficiently enforce the rules for better corruption control. Rose-Ackermann (1999) and Sousa (2010) favour creation of independent ACAs for controlling corruption. Lambsdorff, (2007) argues that effectiveness of the anti-corruption enforcement depends upon how the instruments meant for controlling corruption distribute rents and the conditions attached with those rents in achieving the objective of corruption control. The absence of or a low level of constraints faced by the agents (Public servants) from their respective ACAs gives indication about the inefficient rent distribution by the instruments meant for controlling corruption. Khan (2007) attributes the inefficiency of enforcement agencies to the institutional arrangement in which they have to function. His argument finds support in the studies of De Souza (2010), Pinsker (2001), Pinto et al., (2008) and Quah (2017). Lack of functional independence to ACAs remains to be an area of concern in many jurisdictions. Lambsdorff, 2000) talks about deliberate attempts to create weak ACAs as the leaders do not have incentives to hold themselves accountable for their decisions. Study

conducted by Princeton University (2014) shows that the beneficiaries of corruption networks often seek to neutralize the ACAs by weakening their legal powers. In many developing countries, ACAs remain institutionally weak in performing their professional work. In the case of Russia, Pinsker (2001) attributes the weak legitimacy of Russian ACA to the need for taking permission from government before investigating higher officials. Quah (2017) argues that Anti-corruption agencies of South Korea and Philippines are toothless because of unwillingness of the government to fight corruption. ACAs of South Africa, Kenya and Nigeria have also been criticized for their inefficiency.

The United Nations Convention against Corruption (UNCAC) and the Jakarta statement<sup>3</sup> on anti-corruption agencies underline the importance of independent ACAs for better corruption control. According to Quah (2017), ACAs *raison d'être* is to act as an independent watchdog that investigates all corruption cases impartially without fear or favor regardless of the position, status or political affiliation of those being investigated. Literature shows empowering the ACAs requires institutional features that guarantee their functional autonomy. Experience of successful ACAs like, the ICAC<sup>4</sup> of Hong Kong, CPIB<sup>5</sup> of Singapore and OGE<sup>6</sup> of the United States of America shows that ACAs must be functionally independent for effective corruption control. The ACA of Hong Kong has power even to incarcerate the suspects in case of risk of flight (Heilbronn J, 2009). The Malaysian anti-corruption law mandates their ACA to examine the practices, systems and procedures of public bodies in order to facilitate the discovery of offence (Malaysian Anti-Corruption Commission, 2016). While explaining the scope of corruption control work done by ACAs, De Souza (2002) argues that the mission of ACAs goes beyond legal and criminal provisions in force. De Speville, et al, (2013) identify distinctiveness of

ACAs from other enforcement agencies as one of the prerequisites for effective corruption control. Heilbronn (2004) rightly argues that the ACAs cannot succeed in the absence of the laws necessary to carry out their anti-corruption functions. Thus, powers to *suo moto* initiate investigation and to prosecute the corrupt are critical for effective ACAs.

## METHODOLOGY

Literature review suggests the presence of strong structural drivers that promote and sustain corruption in developing countries and thus, in spite of the presence of enforcement mechanism in place, developing countries continue to have a high corruption incidence. Similarly, lack of competitiveness prevents the developing countries from generating demand from their institutions for corruption control. This study endeavours to systematically investigate the drivers that impact the effectiveness of conventional corruption control strategies; and the incentive structures that sustain corruption in developing countries against the collected evidence. This work follows deductive reasoning for studying the research problem and thus, it would fall under the scientific paradigm Positivism. Having defined the research objective, this work identified the following variables for study. 1. Economic growth; 2. Level of corruption; 3. Quality of regulation; 4. Competitiveness; 5. Institutional efficiency; 6. Cliental networks; 7. Illegal rent seeking 8. Regulatory quality and 9. Innovation. These variables are associated with governance and their prevalence impacts the quality of governance. Using inferential statistical tools and simple & multiple linear regression models, this work studies the impacts of certain identified predictors on dependent variables.

The level of impact of corruption on economic growth could be an important indicator for orienting the corruption control policies for sustainable economic growth. In order to study this aspect, this work uses secondary data collected for the years 2005-2018 applying simple linear regression technique. The second

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3 It's a statement on principles for independent anti-corruption agencies.

4 Independent Commission against Corruption.

5 Corrupt Practices Investigation Bureau.

6 Office of Government Ethics.

aspect that is being studied in this work is about the impact of regulatory quality on corruption control as the quality of regulatory mechanism is an important determinant of corruption control. In order to study the impact of regulatory quality on corruption control these two variables were regressed using secondary data for 193 countries. It was endeavoured to see if there was any noticeable difference in the outputs between developed and developing countries. Trend shown by the groups of developed and developing countries could indicate the importance of regulatory quality in controlling corruption. Both these regression models used the indicators developed by Transparency International and the World Bank respectively. The third aspect studied in this work is about competitiveness. Promoting and sustaining growth is a governance challenge in many countries. Historical evidence shows that competitiveness has helped the developed countries and some fast growing developing economies to grow fast and to sustain their growth even with a high incidence of corruption. Thus, identifying the determinants of competitiveness and studying their impacts can help the developing economies to have better policy orientation. In order to study this aspect, impacts of the variables institutional efficiency and innovation on competitiveness were studied using a multiple linear regression technique keeping institutional efficiency and innovation as predictors. On this count again secondary data for 134 countries developed by the World Bank was used. Also this work studied

the constraints faced by developing countries due to the strong presence of policy distorting patron-client arrangements; and their commitments for socio-political transformations by reviewing the existing studies in addition to studying the aspect related with demand for corruption control from the powerful. Appropriate descriptive tools like Skewness and Kurtosis have also been deployed in order to explain the behaviour of the data used.

### ANALYSIS

#### Corruption and economic growth:

As per empirical studies, in the case of developed countries, the correlation between corruption and various indicators of governance is negative and, equally, different governance indicators show strong positive correlation with development. Most of the developing countries have recorded similar experience. This shows that corruption control, governance and development are highly correlated. In their comparative study conducted about the impact of corruption on GDP growth in India, Pakistan, Sri Lanka Nepal and Bangladesh, by studying the panel data for the period from 1996-2014, Awan, et al (2014) found the negative impacts of corruption on GDP growth. In the case of India, when the real GDP percentage from 2005 to 2018 were correlated with the corruption perception scores for the corresponding years, results do show a negative correlation of -0.3618. This indicates that with the increase in perception levels about corruption, GDP growth percentage comes down which is similar in experience of most of the countries in the world.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Growth (%)	8.4	9.2	9	7.4	7.4	10.4	7.2	6.5	3.2	6.4	7.3	7.6	7.17	6.7
CPI scores	29	33	35	34	34	33	31	36	36	38	38	40	40	41

**Table -1: Figures of CPI scores and Growth rate: Source- Transparency International**

Mean values for the variables mentioned in the data set given above are 7.419286 and 35.57143 for GDP growth and CPI scores respectively. Kurtosis values of 2.83 and -0.7 and Skewness of

-0.8 and -0.1 for the variables under analysis show that outliers are very small and that the data set are negatively skewed implying normal distribution.

#### Figure 1: Impact of CPI scores on GDP growth.

When the secondary data were regressed, P-value for the intercept was found to be 6.4E-

07. This shows that the relationship between the variables is not random, but has statistical reasons. Regression results, thus, show negative impacts of corruption on real GDP growth in India. Even in the country like India that has huge socio-cultural and regional diversities, corruption has a negative impact on growth. This impact can be more pronounced in countries where there is homogeneity in socio-political and regional contexts.

Drawing evidence from cross country experience, Obamuyi & Olayiwola (2019) in their comparative study about the impacts of corruption on economy found that economic growth in India and Nigeria suffered due to a high incidence of corruption. Both India and Nigeria are comparable on many economic and governance indicators; and corruption has been found to have negative impact on the economy of both these countries. Going into the specifics of the impacts of corruption on economy, Obamuyi & Olayiwola (2019) argue that by acting as a negative externality, corruption impacts growth by discouraging investment and human capital formation, both in India and in Nigeria. Debroy & Bhandari (2012) assess that around 1.26 percent of the GDP goes to public servants through corruption in India. This assessment can partly explain the unevenness in growth among various social and economic groups in India in spite of being the fourth largest economy in the world (Razak, 2013).

### **Corruption control and quality of anti-corruption enforcement:**

The conventional anti-corruption approach depends on effectiveness of the enforcement institutions that have been devised to control corruption. This approach aims to constrain the enforcers who abuse the rules through criminal prosecutions and through measures like transparency; accountability etc. Studies indicate that developing countries face problems in enforcing the rules at-least on two counts viz, 1. Weak design of the enforcement mechanism and

2. Inability of the developing countries to bear the costs of enforcement. While powers and mandate of the organizations form the components of the design of anti-corruption enforcement, rule following behaviour in the society; distribution of power and interest among various organizations constitute the environment in which the anti-corruption enforcement has to function. Khan (2007) talks about capacity of the state to create strong institutions and to efficiently enforce rules for better corruption control. Works of institutional economist Lambsdorff (2007), Rose-Ackermann, Sousa (2010) etc. are also focussed on the need for creating strong institutions for controlling corruption.

The conventional corruption control approach aims to address corruption by strengthening the anti-corruption enforcement and by making engaging in corruption a costly choice for those who exercise power. But, effectiveness of its prescriptions depends upon how the instruments meant for controlling corruption distribute the rents and the conditions attached with these rents in achieving the objective of corruption control. Evidently, as argued by Sousa (2010), many of the Anti-Corruption Agencies have fallen short of the expectations they raised. Works of Jeremy Pope (2000), Heilbronn (2004), Lambsdorff (2007) show that the Anti-Corruption enforcement in many developing countries remains inefficient. There is similarity in the inefficiency of anti-corruption agencies in developing countries across continents. While working successfully in developed countries why the systemic corruption control approach is a near failure in developing countries has been researched in the academia by various scholars. The dominant view in the literature is about the institutional constraints prevailing in developing countries.

Theoretically, the conventional corruption control approach has drawn insight heavily from the Principal-Agent model that makes assumptions about corruption committed by the self-centred agents by causing information asymmetry.

Lambsdorff (2007) argues that even the definition of corruption is often derived from Principal-Agent Model. But, while explaining the corruption phenomenon through the concept of information asymmetry, the principal agent model could not provide solutions to make the principal principled; rather, its assumptions and prescriptions are agent or enforcer centric. Logically, for the successful application of Principal-Agent Model in corruption control, the principles in governance need to be principled; and even for acting against the agents the rents associated with the interventions need to be efficiently distributed by the principal.

But, in reality this hardly happens in developing countries. Instances of grand corruption and political patronage by political leaders are reported across jurisdictions. Many heads of states and political leaders have been found engaged in corruption and favouritism in the past. But, many of them could not be punished. There were instances of political leaders from African countries embezzling the public money and fleeing their countries in the past. Serious allegations of corruption were levelled against the political leadership of Indonesia, Malaysia, Brazil, Sri Lanka etc. in the recent past. The recent example of corruption charges against a former Malaysian Prime Minister in 1MBD scam shows that even in Malaysia where the Anti-Corruption Agency is considered to be independent and successful, high level corruption could not be deterred. In India too there were corruption charges against many political leaders and some of them including a former Prime Minister and at-least three former Chief Ministers have been convicted on corruption charges. Developing countries, India and Brazil witnessed regime changes in the recent past due to allegations of high level corruption.

It has been shown by many studies that regulatory quality is a strong determinant of corruption control. Strong legal instruments are essential for efficient rent allocations in the society. Evidence shows a very strong positive correlation

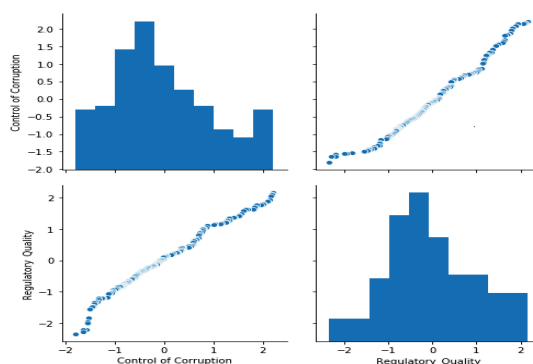
between regulatory quality and corruption control. For studying this aspect secondary data was collected from global governance indicators released by the World Bank for the year 2017. The variables identified for data analysis were 1. Control of corruption and 2. Regulatory quality. The correlation coefficient for the variables under analysis across 193 countries was found to be 0.9911 showing a strong positive correlation. When these variables were regressed keeping regulatory quality as the predictor, regression results gave the coefficient of determination of 0.9824 with P-value 0.031526, indicating a strong impact of regulatory quality on corruption control. (Data source: World Bank). For the data set under study, values of Skewness and Kurtosis show that the distributions are Platykurtic and right tailed implying normal distributions.

**Table: 2: Descriptive statistics**

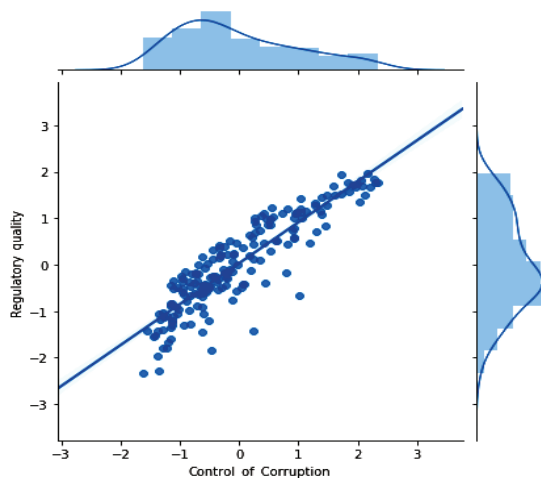
<i>Control of corruption</i>		<i>Regulatory quality</i>	
Mean	-0.039689119	Mean	-0.0187
Standard Deviation	0.998123712	Standard Deviation	1.00054
Kurtosis	-0.468303009	Kurtosis	-0.41136
Skewness	0.549911983	Skewness	0.208226

Below shown pair plot for the data set helps to visualize the pattern of distribution of dependent and independent variables individually and the relationship between them as well.

Figure 3 & 4 Pair plot and regression table between the variables Regulatory quality and Corruption control.







The regression plot above shows the direction and strength of relationship between the variables regulatory quality and control of corruption. As per analysis, almost all the data points centre on the line of best fit, showing a very strong positive relationship between the variables. Data analysis for the given data set further shows that countries that have a better regulatory quality also have better scores on corruption control and *vice versa*. Incidentally, most of the countries that have positive scores on a regulatory quality are developed. This explains that economic development is also a strong determinant of a regulatory quality. Thus, there is a causal relationship between economic development, regulatory quality and corruption control. Results, thus, indicate the necessity for ensuring strong regulatory instruments for better corruption control.

### **Lack of demand for corruption control from the powerful:**

Institutional economics approach to corruption control looks upon the demand from the stakeholders for controlling corruption; and the capacity of the state to bear the costs of corruption control. As such, the state cannot succeed in anti-corruption enforcement from above in the absence of complementary efforts from stakeholders. Here comes the role of powerful organisations in a country with whom the state

shares power and resources. Such organizations can be political parties, social movements, business corporations, pressure groups etc. Khan (2013) argues that the most powerful socio-political and economic groups and organizations in developing countries do not want to control corruption because of their inability to stand on their own without rent seeking. Evidently, powerful organizations in developing countries have not acquired competitiveness and they still rely on patronage and illegal rent seeking for their survival. As a result, there is no demand for corruption control from powerful organizations in developing countries. Absence or weak rules for regulating political party funding; unregulated rent allocations; making rules to suit the interests of certain groups etc. can explain the lack of interest among the power groups for controlling corruption. But, the scenario is different in developed countries because, in developed countries, there is a demand for corruption free environment by their powerful organisations as these organizations are more in numbers with competitiveness. Such organizations cannot work in the environment where there is informality in rent allocations. Even in developing country like China, where the corporations have acquired global competitiveness, there is a demand for a clean business environment. This is further evident from the fact that most of the developed countries like the USA, UK, France, Germany and a developing country like China have criminalized bribing foreign public servants. Even in India, the software industry is concerned about its business reputation and is demanding for a corruption free environment (Khan, 2013). Thus, in the absence of any complementary effort by the powerful stakeholders, developing countries cannot improve the capacity of the state to control corruption; and this sustains low competitiveness; patronage and illegal rent seeking. This arrangement can eventually lead to state capture by the private parties.

Such scenarios have been studied in many developing countries. The presence of organized

groups in resource redistribution has been found to have distorted the economic policies in Russia and in Bangladesh. Khan (2013) presents evidence about political patronage for uncompetitive, but politically connected corporations in power sector of Bangladesh and in Nigeria. His study shows that twenty billion dollars of public money goes to the private parties annually due to inefficiency in resource redistribution in the power sector of Bangladesh. In redistributive corruption, part of the public money is shared by the private players with those who illegally allot rents to them. Inadequate or absence of institutions that can regulate rents or deliberate attempts to subvert the institutions to favour private actors can be critical determinants of redistributive corruption in developing countries. Thus, unlike in the case of petty corruption where the agents are involved in corrupt deals, redistributive corruption where the powerful organizations and those who are in power collude cannot be tackled by conventional anti-corruption approach because, the enforcers themselves are party in redistributive corruption; and the institutions meant for corruption control work under them (Khan, 2007). Williams (2018) argues that one of the reasons for failure of systemic anti-corruption efforts is the absence of principled principals to control corruption. This, logically, breaks-down the effectiveness of corruption control measures based on Principal-Agent model in developing countries.

### **Clientalism and corruption in developing countries:**

In addition to their less competitive organizations that cannot survive in the environment of strong law enforcement, also there is the problem of privileges and patron-client networks in developing countries. These cliental networks have the capacity to influence the state because of the privileges they enjoy. In their study about clientalism and corruption in Greece, Trantidis; Tsagkroni, Vasiliki (2017) argue that in developing countries, clientalism retains a politicized economy that fosters rampant corruption and

makes no serious efforts to control the corrupt behaviours. Interestingly, this patron-client relationship is repetitive (Semenova, 2018) and thus, there is reciprocity of trust based promises and obligations between the patron and clients (Lebra 1975). Study of Arriola (2009) about patron-client networks in Côte d'Ivoire, Kenya, and Senegal suggests that leaders can achieve a degree of stability for their regimes by using state resources to facilitate intra-elite accommodation. He further produces evidence of cabinet appointments to reinforce patronage based rule in many African countries.

In Asian countries also clientalism is common. Khan (1998) argues that the Malaysian cliental networks could co-exist with capitalist sector due to its vast mineral wealth. In Sri Lanka, due to penetration of politics into working class organizations strong patron-client system has developed (Gamage, n.d). While talking about the influence of clientalism in Ukraine and Russia, Miller (1998) argue that use of contacts and influence has shifted from the subtle towards an increased use of crude monetary bribes. In the case of India, Kohli (2009) argues that power rests on multi-class coalition of patrons-client networks. Since clientalism is associated with higher levels of rent seeking (Hicken, 2011) and active support from those who are in power, it has adverse economic implications. Unless in the case of petty corruption where gratification and favour are exchanged, clientalism can result in grand corruption whereby rules can be framed to suit the interests of the interested groups. Thus, patron –client networks have the potential to distort the state policies in their own interest in developing countries. It is not that clientalism is not operational in developed countries. But, clientalism is not distortive in developed countries because of the presence of detailed procedures for rent seeking and rent allocations (Khan, 2013). Incidentally, many developing countries could not come out of the patron-client arrangement by making detailed procedures for resource allocations and for controlling corruption.

Also there are differences in the socio political commitments of political parties between developing and developed countries. Developing countries do attempt to meet their commitments by taking various affirmative actions and granting privileges in order to promote fair distribution of power and resources. Aiming to enforce rules strictly in such environments can increase the costs of corruption control because; such efforts may harm the politics and economics in the long run. Costs of corruption control is a well-researched area in academia and it has been found that if the developing countries tend to enforce rules efficiently, its cost on their social and economic policies will be so huge that they will not be able to bear. In the case of India, the Prevention of Corruption Act, 1988 was amended in 2018 (Government of India, 2018), to make it mandatory for the investigating agencies to take prior approval from the government for instituting enquiry; inquiry or investigation against a public servant unless a public servant is apprehended while committing the offence because, it was perceived that the Anti-Corruption enforcement was hampering the functioning of government.

The 2018 amendment, though against the principle of functional independence to Anti-Corruption Agencies, has been justified on the ground that (because of the 1988 Act) many honest public servants were harassed and eventually never convicted; reputations were ruined and a fear amongst decision makers was created. Eventually, this witnessed a tendency where civil servants would postpone decision making to their successor rather than taking risks in decision making (Jaitley, 2018). This shows inability of the state to bear the costs of corruption control through functionally independent Anti-corruption enforcement. In Brazil, Ketchel (2019) argues that political parties act as vehicles of patronage, facilitating negotiations between regional and economic interests; and the government, all in the guise of democracy. This talks about the forces that operate and privileges given in the name of protecting regional and

economic interests. He has studied the political parties engaging in patronage politics in Latin American countries also.

While talking about the politics of privileges, Weingast (2008) argues that privileges are not always arbitrary and they can serve the purpose of maintaining equilibrium in the society. Corbridge (2009) supports the view of positive effects of privilege politics by arguing that opportunities need to be provided to the poor and excluded people in economic development in order to deter them from the paths of unrest and rebellion. Such commitments makes the developing countries unable to reorient their policy priorities in such a way that their inability to bear the costs of corruption control does not distort their policy objectives. But, developed countries have grown to a level where informality in resource redistribution cannot be productive. As a result, the demand for corruption control by powerful forces has evolved over years in developed countries; whereas in developing countries, the scenario is quite opposite.

The conventional corruption control approach by assuming fair distribution of power and resources in governance also ignores the governance obligations of developing countries for their socio-political transformations. But, in reality, these assumptions are hardly found in developing countries and the developing countries keep struggling between their commitments for socio-political transformations and corruption control objectives. Thus, even the aggressive application of neo-classical prescriptions for corruption control produce very limited results in developing countries. As a result, the Anti-corruption agencies model could not significantly alter the nature of corruption prevailing in developing countries.

As it is clear, main reason for the significant failure of conventional Anti-Corruption approach in developing countries is that its solutions for controlling corruption across the board are too heavy to be enforced considering the low capacity of developing countries. But, development is

something that cannot wait; and corruption has to be fought for achieving development. Thus, taking a developmental approach to controlling corruption could address the issues of corruption and economic growth together in developing countries. Developmental approach combines both corruption control and competitiveness not in all sectors; but, in the sectors that promise high and sustainable growth.

**Institutional efficiency; Innovation and Competitiveness:**

Competitiveness is associated with many factors such as, innovation; corruption control; strength of institutions etc. Evidences show, competitiveness increases with decrease in corruption and the countries that have less competitiveness do experience poor scores on indicators like efficiency; innovation; corruption control etc. Thus, it is imperative for the developing countries to increase the efficiency of their institutions,

including the efficiency of their anti-corruption enforcement in addition to promoting innovation. In order to study the impacts of the variables efficiency and innovation on competitiveness secondary data was collected from the report published by the World Bank for 2017-18. Multiple regression analyses for the scores of 137 countries with regard to the variables competitiveness, efficiency and innovation provide interesting results about the impacts of the predictors' efficiency and innovation on the dependent variable competitiveness. Results do show strong positive correlation between these three variables.

Table: 3: Correlation table.

	Overall _score	Efficiency	Innova-tion
Overall _score	1		
Efficiency	0.9719747	1	
Innovation	0.9181297	0.91550917	1

**Figure 5: Trend line showing the impacts of efficiency and innovation on competitiveness.**

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.974513057
R Square	0.949675697
Adjusted R Square	0.948924588
Standard Error	0.158379917
Observations	137

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.443853315	0.07967	5.571178	1.33E-07	0.286281	0.601426	0.286281	0.601426
Efficiency	0.776310164	0.046053	16.85673	6.41E-35	0.685225	0.867396	0.685225	0.867396
Innovation	0.155711941	0.04293	3.627138	0.000406	0.070804	0.240619	0.070804	0.240619

**Table: 4 & 5: Multiple regression tables**

For the given data set, adjusted R-square value of 0.948924588 shows that around 95% of the variance in dependent variable competitiveness is explained by the predictor variables efficiency and innovation. Besides, P-value of the intercept 1.33E-07 shows that the relationship that exist between the variables has statistical significance. From the results it can be inferred that in order

to achieve competitiveness, governance should increase efficiency of the institutions and promote innovation in developmental activities. In other words, efficient institutions along with innovation can be a strong determinant for achieving competitiveness.

It cannot be a pragmatic idea to strive for increasing competitiveness of all the sectors in developing countries simultaneously because such an

effort requires certain specific requirements like, institutional efficiency; state capacity etc. which the developing countries do not have. Such capabilities can be built gradually by identifying the sectors that can provide sustainable high growth; and efficiently managing the rent opportunities in those sectors. Managing rent opportunities could also include restructuring the resource allocations in such a way to improve the competitiveness of organizations.

## CONCLUSION

Corruption control in the complex economy is the function of many forces that have competing interests and state is one among them. Thus, corruption control requires demand from powerful socio-political and economic forces for corruption free environment; and the state to have capacity to bear the costs of corruption control. Unfortunately, developing countries are not rich enough to bear the costs of corruption control; and their powerful forces are not competitive enough to demand corruption free environment. As a result, corruption continues to remain systemic in developing countries. With high corruption, aspiring for sustainable high growth rate for few decades in order to become a developed country also is a governance challenge for developing countries. Evidence shows that no developing country has controlled systemic corruption through conventional corruption control strategy and that systemic corruption hampers competitiveness. Thus, corruption control in developing countries requires a pragmatic approach that combines the objectives of both economic growth and corruption control. Such a pragmatic approach could be development centric and can help to improve competitiveness of the sectors that can result in high and sustainable growth. Thus, in addition to the corruption control arrangement in place, developing countries should identify the critical sectors that can promise high growth and devise the incentive structures in such a way that there emerges demand for clean environment from the powerful forces. Sector focussed corruption

control approach can lower the burden of the costs of corruption control too on the state.

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# Public Perception of Police in Chandigarh: A Comparative Analysis Before and During COVID 19 Lockdown



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

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## ABSTRACT:

During Covid-19 Lockdown crisis in India, police have emerged as a multidimensional force. From maintaining law and order to supplying ration at the doorsteps of citizens in need, from innovating new regulatory mechanisms to being mediators or counselors, transitioning from traditional marchers to techies, from strict implementers of law to social activists, from legal experts to medical assistants in times of need, the police have won the hearts of citizens with their exemplary work and effective policing. The present study deals with the Public Perception of Police in Chandigarh. To know public perception, a sample of two hundred and sixty respondents was selected on random sampling basis from the city. The structured questionnaire covered wide aspects like (i) Attitude of Police towards citizens, (ii) Performance of Police (iii) Effective Patrolling (iv) Public Opinion on Police Administration (v) Attitude of mass media and social media and (vi) Police-Public Relations, for seeking respondent's opinion on pre lockdown and during lockdown in Chandigarh. To analyze the same psychometrically, three-point Likert scale has been used for scaling the responses in the survey research. The data has then been analyzed by applying suitable statistical techniques like measures of central tendency and Chi-square. The analysis of 4420 statements of 17 questioned survey revealed that public perception towards police turns positive when police are used as an 'instrument to social change' rather than solely as a 'tool to maintain law and order'

**Keywords:** Police image, Public perception, Covid-19 lockdown, Chandigarh

## INTRODUCTION:

Public perception of police is an important concept to consider while examining the role of police in a democratic society. How public views the police can determine the legitimacy of police authority and citizen's compliance with law. It also influences the extent and quality of citizen cooperation and interaction with the police.

In addition, the public's role in admitting the police authority depends on the formulation of a reasonably accurate image of the police and how they function.

There is no single coherent image of police in any society around the world because unlike other organizations they don't perform single function but discharge numerous duties ranging

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## Author's Intro:

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from law and order to administration of big events, prevention of crime to controlling the crime, Security to welfare. While catering to these multidimensional duties, the police may succeed in few and may fail in others resulting in mixed responses from different categories of society. To maintain their legitimacy as social control agents and power centric units, the police employ powerful symbols to promote images of authority and capacity to control crime. This willful representation of police functioning and expectations of public from police have a great impact on their public image. Further, for many, who haven't ever interacted with police directly, their perception about police image is largely influenced by peer groups or reporting through mass media and social media. However, such indirect factors, many a time be inconsistent with the reality of policing. Then arises a need for Reality Check.

#### **NEED OF THE STUDY:**

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, China, and has resulted in an ongoing pandemic. The first confirmed case has been traced back to 17 November 2019. As of 21 June 2020, more than 8.84 million cases have been reported across 188 countries and territories, resulting in more than 465,000 deaths. More than 4.39 million people have recovered.

In India, the first case of Covid-19 was confirmed in the state of Kerala by the Government of India on 30 January 2020. On 19<sup>th</sup> March, as the number of confirmed COVID-19 positive cases reached 500, Prime Minister Narendra Modi, asked all citizens to observe 'Janata Curfew' (people's curfew) on Sunday, 22 March. But at the end of the curfew, Prime Minister Narendra Modi stated "Janata Curfew is just the beginning of a long battle against COVID-19". After this, during his address to the nation on 24 March, he announced the nationwide lockdown from midnight of that day,

for a period of 21 days initially, but it is extended till 30<sup>th</sup> June, 2020 as of the date of submission of this research paper.

The Government issued guidelines on the measures to be taken by the police for the containment of the pandemic, like warrant for criminal proceedings against individuals who violate the curfew. It, however, allows certain exceptions to the containment measures, whereby an individual can venture outside for his/her essential needs.

During Covid-19 Lockdown in India, the Principal Investigator got the chance to be part of Sector Response Team, Chandigarh to cater to the needs of Senior Citizens and other residents in terms of food and other requirements along with supervision on the community to maintain social distance in public areas like markets. This not only gave an opportunity to have a closer look at the working of police force but also study the public police relationship in terms of law enforcement and welfare activities. During Lockdown crisis, Police have emerged as a multidimensional force. From maintaining law and order to supplying ration at the doorsteps of citizens in need, from innovating new regulatory mechanisms to being mediators or counselors, transitioning from traditional marchers to techies, from strict implementers of law to social activists, from legal experts to medical assistants in times of need, the police have won the hearts of citizens with their exemplary work and effective policing. The dominant presentation of their work has shifted from a "professional" image to more of a "community-oriented" image during the COVID-19 lockdown. While the former image highlights the police as neutrally competent law enforcement experts, the latter emphasizes the police as responsive partners with the public, concerned with the overall quality of life and instrument to social welfare. This shift has been taken as an opportunity to see the changes in the formation of public perception of police image and an effort has been made to assess the factors for this change and that can be incorporated

and institutionalized by police organization for maintaining this positive image in future i.e what was the perception of public before lock down, what was the perception during lockdown, whether there was any change in the perception during lockdown, if yes, then what were the reasons, and study of these reasons that can help to maintain the achieved positive police image.

### **OBJECTIVES OF STUDY:**

Whether gender, age, educational background or financial status of citizen have any bearing on their perception of seeking police help directly?

Has general image of police been affected by attitude of police and public police relationship during lockdown?

Whether mass media and social media portrayals, before and during lockdown, are important determinants of public opinion of the police, regardless of whether public has had direct or vicarious contacts with police officers?

What amongst political interference, lack of public cooperation and lack of good working conditions affect the effective discharge of duty by police before and during the lockdown?

Does frequent and effective patrolling, during lockdown, and responsiveness of police on the call of service help in creating healthy relation between public and police?

### **Sample Characteristics:**

The present study deals with the Public Perception of Police in Chandigarh. To know public perception, a sample of two hundred and sixty respondents was selected on a random sampling basis from the city. The respondents were identified and selected to represent a cross-section of the society. The public sample covered Students, Advocates, Teachers, Government Employees, Businessmen, Doctors, Journalists, Social Workers and Common People. Further the three income groups i.e. Lower, middle and higher were included in the questionnaire. Besides, the age groups in the

interval of 10 years each, ranging from youth (20 – 30 years) to senior citizens (above 60 years), this survey has also sought information on educational qualifications (Below Senior Secondary to Post Graduate and above) of respondents.

### **Methodology:**

The study has used both Primary and Secondary data and is based on both qualitative and quantitative data. Primary data has been collected from respondents by administering a structured questionnaire whereas secondary data has been collected from books, journals, Govt. documents and other compilations. The information available on websites of police departments, stakeholders and Information Portals has been extensively accessed. For quantitative data, the questionnaire covered wide aspects like (i) Attitude of Police towards citizens, (ii) Performance of Police (iii) Effective Patrolling (iv) Public Opinion on Police Administration (v) Attitude of mass media and social media and (vi) Police-Public Relations, for seeking respondent's opinion on pre lockdown and during lockdown in Chandigarh. To analyze the same psychometrically, three-point Likert scale has been used for scaling the responses in the survey research. Qualitative data has been collected on the basis of information gathered during interaction with the public/residents of city, and observation of Principal Investigator during his duty as member of Sector Response Team, Chandigarh. The quantitative data has then been classified and tabulated. The data has then been analyzed by applying suitable statistical techniques like measures of central tendency and Chi-square.

### **FINDINGS:**

Perception of Seeking Police Help Varies With Gender, Age, Education and Income.

**Gender:** A male dominated police force representing only 7% women police officers is more likely to exhibit skewed gender norms about the role of police and tolerance of violence committed against them. The recording and the

subsequent filing of FIR's is also lesser as either the women are discouraged or turned away or harassed further while trying to lodge the complaint.<sup>1</sup> Present study has corroborated the above findings where the results have shown that even in an advanced and open society like Chandigarh the majority of female respondents (58%) have never sought police help directly whereas 64% male respondents met police and sought help. This clearly reflects skewed gender norms in our society in approaching police.

**Age:** Study revealed that there is a strong positive correlation between the age and seeking police help. This is reflected from the fact that 39% of the respondents in the age group of 20 to 30 years have sought police help and in the subsequent age groups upto 60 years and above, this percentage has increased from 39% to 77%.

**Education:** As per the latest data of National Crime Record Bureau (NCRB), a written complaint has a better chance of being registered than a verbal complaint. The data show that 53% of written complaints were registered, while only 5% of oral complaints saw legal action by police. Complaints made through Dial 100 had only 1% success rate.<sup>2</sup>

For the less educated people, reading and understanding technicalities of law or even writing an application or complaint to SHO is very difficult. Culture of red tapism and unnecessary formalities further makes the process so cumbersome, resulting in lesser faith and poor image of police among the uneducated or less educated citizens. Present study has revealed that with an increase in educational qualifications, the chances of approaching police also increase. There has been an increase from 29% to 64% in respondents having educational background from Senior Secondary to Post Graduate respectively.

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1 India's all-female police stations are encouraging women to report crimes, finds study [Online] <https://scroll.in/article/902223/indias-all-female-police-stations-are-encouraging-women-to-report-crimes-finds-study> [accessed on 27-05-20]

2 Telling Numbers: In India, Police Don't Care Much For Rights Bodies [online] <https://indianexpress.com/article/explained/telling-numbers-in-india-police-dont-care-much-for-rights-bodies-6208889/> [Accessed on 27-05-20]

**Income:** President Ram Nath Kovind, while addressing on the National Law Day in his speech on November 25, 2017 said that "India has acquired a reputation for an expensive legal system. In part, this is because of delays but there is also a question of affordability of fees. The idea is that a relatively poor person cannot reach the doors of justice for a fair hearing only because of financial or similar constraints".

Police are the entrance to the Criminal Justice System followed by courts and prisons. Person from lower income group avoids approaching police as far as possible. The 'chai- pani ka kharcha' (a popular slang of indirectly asking for petty amount as bribe), amount to be spent on outside court settlements and if, the case reaches court then the fees of lawyers are taxing on the pockets of lower income group.

To avoid all this, the lower income group continues to stay away from reporting the wrongs committed against them in India. Present study revealed that there is a strong positive correlation between these two factors. The study further established that as the income level increases, the chances of approaching police increases which means that people from low strata of society with lower income avoid seeking police help.

General image of police has been positively affected with a friendly attitude of police and good public police relationship during lockdown.

**Friendly attitude of police towards public:** In any democratic society, police are expected to have a friendly attitude towards public. But in India, with age old and archaic Police Act, our police still have to function following procedures and presenting a deterrent attitude as was expected from them in British era. Covid- 19 lockdown has shown the mirror to the police organization that their image has been tarnished because of Barbaric attitude of the past which needs to be changed to a friendly attitude for constructing a better image.

The factors constructing the perception for

attitude of police are beliefs, feelings, showing compassion, friendly interaction and actions of police towards public. During lockdown, the police successfully improved the perception of public about their caring attitude by catering to the needs of citizens, feeding the needy, caring for stray animals, celebrating birthday cakes with toddlers and Senior Citizens, spreading lockdown messages through songs and artistic videos. The results of study showed that there has been a massive increase in percentage of respondents saying that friendly attitude of police towards public has risen from mere 36% to 82% (approx.) from pre-lockdown to during lockdown period respectively.

**Public Police Relationship:** Police-Public relations are the reciprocal attitude of the police and public to the expected and performed tasks of the police.<sup>3</sup> It is a process of establishing and maintaining a mutual understanding and appreciation between an organization and public, through an effective two-way communication.<sup>4</sup> Although the police have either assumed or have been assigned responsibility for dealing with many more complex social problems, its folly to think that they alone can solve all of them. In reality, the police can perform to a limited extent in other non - core policing areas and they need assistance of public in the said functioning.

Even effective crisis reactions often require the involvement of non-police resources. COVID-19 lockdown period provided an opportunity to establish and maintain a mutual understanding and appreciation between the Police department and public. Images of residents showering petals on police officers, offering food and tea to officers on duty, distributing homemade masks to police and prayers of well-being of police officers health and the same is evident statistically through the responses which shows that general public witnessed an upswing of 14% to 69% in

good relationship with police, at pre and during lockdown.

The cross tabulation of variables 'attitude of police' and 'public police relation', during lockdown, has revealed a significant relationship (p-value of .000) between two variables. Improvement in attitude of police has strengthened its relationship with public. 64.6% of respondents responded that during lockdown the attitude of police was friendly and they also enjoyed good public relationship. Whereas only 3.8% respondents disagreed to the majority perception and said that they faced a hostile attitude of police and witnessed a poor police public relationship. Both these factors helped in improving the general image of police among the public.

Further the combined effect of variables i.e friendly attitude of police and public police relationship improved the general image of police from 9% to 57% pre lockdown to during lockdown respectively.

**Direct encounters or interactions are though main source of relationship or image building yet individuals' vicarious encounters with police i.e. encounters they merely hear about from family, friends or reported by media, significantly affect their opinion about police:**

As reported in earlier studies, people especially women, minorities and youngsters have fear of police excesses and lack trust in police. The Principal Investigator felt the need to study the role of mass media and social media in formulation of opinion regarding police image. Further, while being part of Sector Response Team, Chandigarh during lockdown period the Principal Investigator, during personal interactions with Senior Citizens, migrant labourers and students, was surprised to know that the majority of them had never contacted the police directly. So, it was assumed that their opinion is formed and influenced by the media reporting.

As already stated above, 58% female respondents have never sought police help directly whereas

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3 Redelet, Louis A (1980), Police and Community, Glence Publishing Co. Inc. California , p. 9

4 Black, Sam (1970), Practice of Public Relations, P.R. Society, ELBS Publications, UK, p. 6

64% male respondents met police and sought help. The survey captured two kinds of contacts with police officers i.e. formal and informal. Formal contacts included residents' calls to police stations requesting service and police questioning of residents regarding possible crimes. Only 42% of total respondents (male and female) sought police help and came in formal or informal contact with police. The informal contacts included conversations with police officers on patrol and interactions with police at community meetings and police sponsored youth activities. Also, only 39% of the respondents in the age group of 20 to 30 years have sought police help and as the age increases from 31 to 40, 41 to 50, 51 to 60 and above 60 years, this percentage has increased from 39% to 77%. With these variations, it can be concluded that it is not only direct contacts but also vicarious contacts i.e. discussions in peer groups, feedback from friends and relatives and reports in mass media and social media which play a significant role in molding police image.

Regarding the role of mass media, a query was posed in questionnaire that "What was the attitude of mass media (new papers, radio and news channels) towards reporting on police. Whether mass media (i) highlights the good work of police; (ii) reports neutrally on police or (iii) Distorts the facts while reporting on police." Responses have clearly showed that attitude of media highlighting the good work of police has increased from 34% to 75% from pre lockdown to during lockdown respectively. Similarly, social media reporting has transformed police image a lot.

As mentioned in study earlier, the young respondents in the age group of 20 to 30 years derived the image of police from social media though they rarely had come in actual contact with police. Influence of social media platforms like Facebook, Tiktok, You tube, Twitter and Instagram is very high amongst this age group and statistics established very strong association between age and social media usage on formation of police image with p-value of .002 of chi square.

Especially the respondents in the young age group of 20-30 years and more active on social media opined that their perception of police image was largely influenced through social media like Facebook, Tiktok, You tube, Twitter and Instagram but with posting of majority positive posts on police work during lockdown changed their opinion to positive and same has increased from 34 to 89 %. This implies that content posted on social media presented good image of police and many police official through their Facebook and Twitter handles posted the good work being done by their organization.

**Political interference, lack of public cooperation and lack of good working conditions affect the effective discharge of duty by police before and during the lockdown:**

To understand the perspective of public for reasons for ineffective discharge of duties by police in pre-lockdown and during lockdown period, the question "In your opinion the police were not able to effectively discharge their duties because of (a) Political interference (b) Lack of public cooperation (c) Lack of good working conditions". Respondents are of the opinion that lack of public cooperation is the biggest reason for ineffective discharge of duties by police instead of political interference or lack of working facilities during lockdown whereas others also opined that pre lockdown reasons for ineffective discharge of duties was political interference, overburden, lack of motivation, lack of professionalism, unsatisfactory rewards and recognition.

**Frequent and effective patrolling during lockdown and quick response to the service of duties by police during lockdown has resulted in good image of police as compared to past.**

Police performance can be measured by two ways i.e. direct and indirect. Direct measures of police performance commonly used include crime rates, number of arrests and fines issued, clearance rates, and calls for service response time. Some indirect measures of police performance include surveys, direct observations of social behaviour, situational

studies and independent testing. In order to assess the performance of police, the respondents were asked to rate police in terms of completion of duties considering the responsiveness of police on the call of service. The results of study showed increase from 29% to 77 % from pre lockdown to during lockdown situation.

**Patrolling:** During COVID-19 lockdown patrolling has proved helpful in two ways. On one hand it has raised a fear among the covidiot (a term coined during COVID-19 lockdown for those who don't follow covid rules of staying home) and on the other hand has presented a sense of security to the residents and also it has been seen as a connect between administrative machinery and residents. Patrolling is an effective technique undertaken by police to ensure safety of public and prevent crime rate. As compared to 23% for pre lockdown patrolling it went to 77% during lockdown. This shows that police used this technique to a large extent for the smooth implementation of administrative instructions and policies.

## RECOMMENDATIONS

During lockdown, police emerged as a multitasking force while discharging functions beyond core policing. They emerged as champions while working as frontline warriors. Instead of taking this pandemic as a threat, they used it as an opportunity for improving their general image among public and gain confidence which has been lost or was felt missing in the last few decades. Though lot has been done and achieved by police force yet this study has been able to highlight some areas which still need to be improved upon. Some of the recommendations are mentioned below:

**Developing Communication skills of police officers:** Communications skills for police officers go a long way towards establishing positive relations in the community.

From writing emails, reports or a media release, posting on social media or speaking publicly to the media or community, the effective

communication not only makes job easier but also leaves a lasting impression on others.

Not only the communication skills of officers but also the skills of team communication be developed.

Effective two-way communication helps in reducing misunderstandings.

More and more capsule courses be organized for officers on public speaking and developing communication skills.

A training program for sensitization of officers on friendly interaction with complainants, showing compassion to victims and treating everyone with courtesy should be devised.

**Developing Social Leadership attitude:** Police have attained a commanding position as a Social leader in society during lockdown. For an effective upkeep of this most desired position of police, the leadership has to work strongly in reaffirmation of following areas

**Promoting the culture of serving citizens:** Police leadership should identify the bottlenecks, be it administrative or social, to promote a better and efficient service delivery system for public. They should strive to respond quickly to their needs in a respectful, helpful and responsive manner.

**Responding sensitively to the needs of citizens:** It is important for police officers to understand the needs of marginalized and disadvantaged. Addressing their issues in an unbiased manner and understanding the value of an affirmative action towards these sections of society is significant for attaining a positive and strong social reputation among them.

**Proactively seeking opportunities for initiating new ideas:** While facing challenges in implementing policy decisions, during lockdown, every situation was tackled with development of new techniques, technology and continuous improvement in service delivery by police. This

quality needs to be stressed among all the officials and efforts be made to imbibe this attitude during trainings conducted from time to time.

**More community-oriented programs be undertaken:** Such programs are required to be undertaken for vulnerable sections of the society i.e women and low-income groups, for engaging and addressing their issues and building their confidence in police system.

Self defence classes can be organized for girl students.

Frequent social interactions between Senior Women Police officials with girl students in schools and colleges be undertaken.

More community outreach programs be designed and implemented for BPL families.

**Effective use of social media platforms for highlighting good work of police:** Effective use of social media platforms like Facebook, Tiktok, Twitter, Instagram etc. with a stronger presence by frequent positive posts and promoting police heros.

**Victim oriented courses shall also be designed and be made part of training curriculum: The officers shall be sensitized about need of friendly interaction with complainants, showing compassion to victims and treating everyone with courtesy.**

**Developing skills in Crisis Management:** For handling challenges like COVID-19 lockdown in future, the police officers shall be required to undergo training of Crisis Management.

Capsule courses be designed to develop Crisis Management skills.

A repository of best practices, undertaken by different state police departments during lockdown, be collected and used as case studies for such Crisis Management courses.

**Learning Stress Management:** Long hours

of duty and that too handling situations with unforeseen consequences are adequate to drain out a person physically and mentally.

Yoga and meditation classes be undertaken as stress management techniques.

Seminars be conducted on crisis intervention, stress reduction and how to effectively deal people with emotional trauma. These must be taught by licensed mental health professionals.

**Effective Patrolling :** Patrolling has proved to be very helpful, during Covid lockdown because on the one hand it helps to improve police image and on the other hand motivates residents to assist police.

Police patrolling units should interact with the community under their jurisdiction.

When not responding to a call of service, officers should engage local residents in casual, informal conversation by getting out of their patrol cars.

If they encounter kids playing cricket or volleyball, for example, they should talk to them; even ask if they can bat for a few balls as a way of relationship building.

## **CONCLUSION:**

Police in our nation have become disconnected from those whom they serve but COVID-19 Lockdown changed their image from “professional” to more of a “community-oriented”. During COVID-19, police successfully changed the perception of public towards them but real problem is to maintain this perception after lockdown as well. The results of the study are clearly indicating that **public perception towards police turns positive when police are used as an ‘instrument to social change’ rather than solely as a ‘tool to maintain law and order’** and all the recommendations are presented keeping in view the same and hope that these would be considered and implemented by police organizations in true letter and spirit

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# The Mind-fit Cop: Towards Effective Policing through Mindfulness and Emotional Intelligence



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

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## ABSTRACT

*The central human aspect of Police Reforms is how the Police acts with the public and other stakeholders in various synthetical and antithetical situations, and as a corollary, is dependent on how much the Policemen find themselves prepared with having the emotional skill for the same. Mindfulness is indicative of the Police (wo)man of how much s/he knows the situation around (situational awareness), knows him/herself (self awareness) and the ability to operate using these two.*

*The paper is based on extensive review of contemporary literature on Police officers and mindfulness practices that may help creating a force manned by mind-fit cops. The paper throws some light on current trends with respect to mindfulness practices amongst Police officers in other countries like the US and UK and its positive effects on the well being of Police officers.*

**Key Words:** Police, Police Officers, Policing, Stress, Mindfulness

(Abstract : 136 Words, Main Text: 4152 Words, excluding References)

## INTRODUCTION

Policing is considered as the one of the most dangerous, extremely stressful, highly emotionally and physically demanding occupations; wherein the Police officers are exposed to many potentially traumatic incidents during their entire career span (Andersen, et. al. 2015, Tajeda, **Emeryville Police Department**). The society as well as the Police department expects Police officers to effectively manage their emotions. On the one hand they are expected to display physical as well as facial expressions that are tough, neutral and guarded;

while on the other hand, they are expected to display empathy and thoughtfulness towards the victims of crime. Hence, the Police officers are expected to master the art of continuously switching between this human and disciplinary emotional expression (Bakker and Heuven, 2006). Psychological research has found that the strong, silent type (typical of many Police officers) cannot suppress human emotions without suffering serious consequences (Police Chief Magazine, 2006).

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### Author's Intro:

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The Police departments, around the world, focus on the modernisation of Police force, adequate training for physical fitness and mental firmness of Police officers, effective crime control strategies, dealing with modernised crime techniques etc. But, research has proved that world over; the Police departments have overlooked a very important component in policing i.e. the mental fitness (not mental firmness/toughness) of the Police officers and a thoughtful consideration that they are also human beings who have their own set of emotional experiences; while on the job, is necessary.

The Police officers have to undergo a lot of stress while performing their duties, needless to mention the work life im-balance, always on duty concept (Sec 22, The Police Act, 1861). It is rightly said, nothing but change is permanent. This philosophy is equally applicable to the uniformed services, in general and the Police officers in particular. Hence, one important component in Police Reforms needs to be an effort in making the Police force Mind-fit.

The paper deals with the emotional well being of the Police officers through application of the concept of Mindfulness. Research world over have proved its benefits to Police officers and Policing which has been elaborated in the following sections.

### **RESEARCH METHODOLOGY**

This is a conceptual paper, the aim of which is to understand and summarise how application of psychological principles and research in Policing can improve the Mindfulness of Police officers. This paper is based on extensive review of contemporary literature on Mindfulness; that is relevant to policing; from around the world.

The researchers have planned a two stage research process; Stage I and Stage II.

**Stage I:** In the first stage, an extensive review of literature of the research papers published in some of the best journals, literature specific to Police,

Mindfulness and stress has been done to gain an insight as to what is happening around the world with respect to Police officers and Policing.

The key words used were Mindfulness, Police, Police officers, Policing, Training on search engines like EBSCOhost, DELNET, NDL, Google Scholar and Google (*authentic sites only*). Websites of Sardar Vallabh Bhai Patel National Police Academy and Bureau of Police Research and Development were also referred to.

The results generated were then studied and only those studies were considered that dealt with Mindfulness specific to Police around the world. The research papers and Police specific websites of US, UK and few other countries were also studied to find out if they are still restricted to only physical training for Police personnel of all ranks or if the world has moved ahead and is thinking beyond physical training for Police officers and what its impact is. Is the physical training effective enough to cope with stressful conditions?

It was also attempted to find if any such study on Mindfulness of Police officers has been conducted in India for Police personnel of various ranks. The researchers could not find any such study for India.

**Stage II:** The second stage will deal with Mindfulness exercise interventions amongst Police officers after proper approvals from Police Department and Academy. Pre and post intervention primary data collection; based on few Mindfulness exercises for 3 categories of IPS officers: Officer Trainees at NPA, IPS officers with 5-10 years in service and IPS officers with 10 and above years in service. Eight Weeks Mindfulness training would be done and its impact on Police officers well being will be assessed. Once its effect is established, future course of action may be recommended for other ranks of Police officers.

### **POLICE REFORMS: CONCERNS THAT NEED ATTENTION TOO!**

Research has proved that the “apparently” tough cop has to undergo his/her own share of stress

and emotional challenges too; which they face while performing their day to day job. **Jennifer Tejada, the chief herself at Emeryville Police Department, says that the Police department has** “.....succeeded in training our law enforcement officers on the technical and tactical aspects of being an effective officer. We have provided them with the tools of the trade. We have put them through traumatic and high-risk scenarios to ensure they know how to be tactically safe, to ensure they survive without injury, or at least visible injury. But what about the invisible injuries? The emotional consequences of not just one traumatic incident; but that of a career filled with traumatic and stressful events.” Rudofossi (2009) found that over a 30-year long career, the officers have to face more than 900 (approx.) extremely traumatic events. During such challenging times their role frequently switches between that of a “social worker” to cater to the victims of crime to that of a street fighter”, fighting the criminals (Manzella & Papazoglou, 2014, Andersen, 2015).

The government, society and the policy makers need to understand that policing is an extremely stressful job. With the passage of time, it has been found that there has been progressively more responsibility on Police officers to solve society's evils. It has been found that world over Police officers are trained in newer skills like how to administer drugs, to identify mental illness, to deal with complex crimes like property crimes, body crimes, cyber crimes, but rarely any full-fledged training is imparted to these officers who themselves suffer most of the times. Yeoman (2017) quotes the Police Lieutenant in Hillsboro, Oregon, Richard Goerling, “how are we supposed to navigate someone else’s suffering if we can’t even navigate our own?”

In terms of cost to the organisation, it was found that in UK Police, the extent of sickness through mental health problems was 600,000 sickness days lost a year which are due to stress, anxiety or depression, with 78 officers nationwide away from the workplace for an entire year due to such

illness (Hesketh et. al. 2015, Dorman, 2015). There are also hidden phenomena such as Presenteeism (Johns, 2010) and Leaveism (Hesketh and Cooper, 2014), that add to form a more realistic picture of the policing landscape (Hesketh et. al. 2015).

In India, Police reforms are generally understood as reforms in Policing, revision of the Police Act of 1861, implementation of the recommendations of various committees and commissions, introduction of the Commissionerate system, new legislations and policy revision, trainings to deal with modern crime techniques, modernization in Police etc. However, research has proved that to expect change with these efforts would not bear fruitful results if we do not address invisible issues like the impact of stress on the well being of these officers.

### UNNOTICED CHALLENGES

‘Work can make you sick – and work can make you happy. Which one happens depends on who you are, what you do and how you are treated at work’ (Robertson and Cooper, 2011). Research has correlated policing careers to depression, alcoholism, post-traumatic stress disorder (PTSD), etc along with physical ailments like cardiac ailments, diabetes, sleeplessness, etc. The Police officers experience both operational and organizational stress throughout their careers (McCreary & Thompson, 2006). It has been found that the Police culture values stoicism due to which officers are often reluctant to seek out mental-health treatment (Yeoman, 2017). This problem has led researchers to find out as to how the Police officers look at their world and the practices they have developed to cope with the pressures they are under (Hendriks and Hulst, 2016). Research has proved that the Police officers have to put in effort to display emotions they do not feel i.e. emotional labour, they experience emotional dissonance, undergo emotional exhaustion and stress which has a serious impact on the subjective well being of the Police officers. How the officer bounces back depends upon how resilient s/he is and if s/he has had any formal

training imparted particularly to address these concerns. These are the concerns which need to be addressed, but we are so inclined to see Police officers as toughness personified, that we ignore the “soft” side of their persona and that they are also human beings with common human emotions and feelings.

### **STRESS AND STRESSORS**

Stress is the point after which the amount of pressure a person is under exceeds their ability to cope, conceding that some pressure is actually good for you. Selye suggested the notion that there may be good stress, which he termed ‘eustress’, as opposed to distress (Selye, 1984).

Stress, has been termed the ‘Health Epidemic of the 21st Century’ by the World Health Organisation. Police profession is associated with high stress levels (Kirkcaldy et. al., 1995; Stack, 2001) and hence it demands special attention to reduce its detrimental effects on the well being of uniformed men and women. Amongst the many stressors embedded in the job, the common ones are day-to-day enforcement activities that put officers in potentially dangerous situations, the administrative burden, family and relationship challenges that accompany the job, the state of Police community relations and negative portrayal of the Police by the media (Saunders et. al., 2019).

Stress is also caused by work overload. According to BPRD 2018 data, the statistics for Police with respect to population, area etc shows a difference in the number of Policemen in actual and the sanctioned strength. With respect to the number of total strength for States Police (Civil+District Armed Reserve (DAR)+Armed), the sanctioned strength is 24,84,170 whereas the actual strength is 19,41,473. The all India record for population per Policeman (approx.) (Civil+District Armed Reserve (DAR)+Armed), the sanctioned number is 518.27 whereas as the actual number is 663. The all India record for area in Sq. Kms. per Police- man (approx.) (Civil+District Armed Reserve (DAR)+Armed), the sanctioned area is 1.27 sq. kms, whereas the

actual area is 1.63 sq. kms.

For total Police per lakh of population the sanctioned number is 192.95 whereas the actual number is 150.80. With respect to total Police per100 sq. km. of area the sanctioned number is 78.45 whereas the actual number is 61.31.

The sanctioned strength of IPS officers as on 1.1.2018 was 4,651 at all India level whereas the actual strength was 3,754.

The above data is self explanatory that the fewer number of Policemen as compared to the sanctioned strength creates an additional workload of policing on the shoulders of Policemen of all the ranks.

Research studies have elaborated the nature of the work that put Police at risk of exposure to a number of acute and chronic stressors (Davey et. al., 2001; Newman and Rucker-Reed, 2004; Martinussen et. al., 2007). The connection between extreme stress and health among Police has been studied by Violanti et al. in 2006. In their 10-year longitudinal study, Violanti et. al. found that Police officers, compared with civil service workers had elevated cortisol levels, more depressive symptoms, as well as more post-traumatic stress disorder (PTSD) symptoms. The frequency of job-related PTSD amongst Police officers varies between 7% to 19% (Marmar et al., 2006). Unmanaged stress in Police officers has been linked to depression (He, Zhao, & Ren, 2005; Berg, Hem, Lau, & Ekeberg, 2006; Reichenberg & MacCabe, 2007; Violanti & Samuels, 2007; Waters & Ussery, 2007), anger management (Marshall, 2001), anxiety disorders (Wilkins et. al., 2004; Reichenberg & MacCabe, 2007; Smith et. al. 2016), sleep disorder (Violanti et al., 2007; Violanti & Samuels, 2007; Waters & Ussery, 2007; Gerber et. al., 2010), and burnout (Berg et al., 2006; Martinussen et al., 2007; McCarty et al., 2007).

### **FOCUSED POLICE REFORMS**

The high psychological, behavioural, emotional, and social costs of Police trauma substantiate a significant need for intervention (Amaranto et al.,

2003; Violanti *et al.*, 2006) to cope with stress. Since Police officers experience several stressful events during their career, the Police Reforms need to be focused towards their mental well being too. It has been found through studies that these focussed efforts towards Police officers through Police Reforms have a direct impact on the well being and job performance of the Police officers.

### **MINDFULNESS AND EMOTIONAL INTELLIGENCE**

According to Kabat-Zinn, one of the main founders of the field, Mindfulness is “paying attention in a particular way: on purpose, in the present moment, and nonjudgementally”. It is cultivated on purposely paying attention to things we ordinarily never give a moment’s thought to’ (Kabat-Zinn, 2001). Mindfulness, by its very nature, assumes attentiveness to one’s emotional states so that these states do not result in psychological and physical harm to oneself or others. Mindfulness, which can be understood as an active state of awareness of one’s immediate experiences, may help respond constructively to the dysfunctional tendency to avoid one’s emotions and cognitions, as well as distract from these dysfunctional patterns (Ryan & Deci, 2000; Brown & Ryan, 2003). Mindfulness has been associated with reductions in anxiety (Kim, 2017), and even addiction behaviors (Garland *et al.*, 2014). It basically deals with emotions and hence it becomes important to understand Emotional Intelligence (EI) to understand Mindfulness. EI is the ability to interpret, understand, and manage one’s own and others’ emotions. EI is not about becoming emotionally detached; it is about becoming emotionally mature and confident. The ability to be self-aware and then regulate one’s own emotions is one of the most profound EI competencies that emerged from the research. Research conducted by Ekman (The Dalai Lama and Ekman, 2008) confirms that emotions are in a very basic sense the antithesis of Mindfulness. Emotions supersede conscious, rational, and “mindful” thinking. Mindfulness and emotional intelligence both lay emphasis on people’s abilities to perceive, understand and regulate

their thoughts and emotions.

### **BENEFITS OF MINDFULNESS WITH RESPECT TO POLICE OFFICERS**

Mindfulness interventions have been found to be negatively related to burnout, sleeplessness, anxiety, depression, etc and positively related to psychological well being (Kabat-Zinn, 1990; Ciarrochi & Godsell, 2005; Gardner & Moore, 2012). Kaplan *et al.* (2017) found that mindfulness was correlated to enhanced resilience and decreased burnout amongst Police officers.

Studies have proved that Mindfulness training is related to improvements of attention functions, cognitive flexibility and problem solving, it has been found to be negatively related to perceived stress, and positively related to emotional intelligence, it increases immune functioning and produces brain changes consistent with more effective handling of emotions under stress, it reduces symptoms of burnout and improves life satisfaction.

According to Chopko and Schwartz (2013), the increased nonjudgmental acceptance in police officers was found to be the primary correlate of reduced PTSD amongst Police officers. Police officers need to use optimal behavioral tactics during distressing events. Stressful encounters can interfere with adaptive behavior, which may result in aggression, escape, or freezing, all of which can have negative consequences (Paton, 2006). Among Police officers, greater mindfulness predicts less depression over the first year of service (Williams *et al.*, 2010).

It has been found that the adaptive strategies for coping with trauma play an important role (Kring & Werner, 2004), however, the Police officers often lack this skill (Evans *et al.*, 1993; Gasch, 2006). The Police officers, rather, prefer avoidant strategies like they depend upon alcohol or become silent about their negative experiences and emotions (Amaranto *et al.*, 2003), which often leads to health problems and relationship issues (Berking *et al.*, 2010).

Christopher et al (2016) in their study on Mindfulness-Based Resilience Training program on Police officers found self-reported mindfulness to be associated with increased resilience and emotional intelligence and decreased negative health outcomes among Police officers (cited in Kim 2017).

### **MINDFULNESS IN POLICING IN THE US AND UK**

Safety and wellness of officers has been a very important concern in policing. To build officer resiliency to stress has been a major area of research. The research outcomes have helped in taking some of the major initiatives in most Police departments (Andersen et. al 2015).

Mindfulness training has been gaining momentum in the US and UK Police with it being introduced at several places in the US like Seattle, Washington and Madison, Wisconsin, since it has been found that the Police officers face highest levels of stress amongst all occupations (The Guardian).

In UK, to study the impact of Mindfulness among Police officers an eight weeks course was introduced at Avon, Somerset, South Wales, Hertfordshire, Bedfordshire and Cambridgeshire. This was introduced to understand if Mindfulness training can ensure a "Mind-fit Cop". The results were positive which led to enhanced effectiveness in policing. In Bedfordshire, an initial trial found that work-related-burnout was, on average, lower for 72 people who used the techniques. The participants reported calmer feeling, better sleep, being less reactive and reduction in medication due to pain (Booth, 2018).

Sophisticated methods like fMRI brain scans are being utilized nowadays to understand the benefits of mindfulness. The fMRI brain scan helps in understanding the changes in brain due to mindfulness-based practices (Kim, 2017). In policing, Mindfulness training has shown positive results with respect to stress management and officer wellness.

Police Lieutenant in Oregon, Richard Goerling, has been a champion of Mindfulness based Resiliency Training for about a decade. He was part of the Pacific University study and took 43 officers through a eight weeks course called Mindfulness-Based Resilience Training (MBRT). Major components of the training were meditation, martial arts, breath and body-awareness. (This is primarily a Police-friendly kind of version of Mindfulness-Based Stress Reduction). After the completion of the program, it was found that there was a "significant improvement" in health outcomes like stress, fatigue, and sleep quality (Yeoman, 2017).

Goerling et. al., in a separate study on Mindfulness-Based interventions on cortisol awakening response and its effect on the health outcomes among officers, found that it helps in increasing resilience, emotional intelligence, and mental health while simultaneously decreasing anger, sleep disorder, burn-out, fatigue, and general stress. Officers also reported less difficulty with emotional regulation, organizational and operational stress. (Yeoman 2017).

Mindful Policing can not only improve officer wellness but also has the potential to remove the implicit bias of Police Reforms where only physical fitness and mental firmness are focused. With Mindfulness training, the Police officers can be made more aware, to see that moment in time between stimulus and response as a moment when a mindful officer who is aware of his or her body's reaction to stress and trauma can take those crucial breaths to strengthen attention and gain emotional regulation, they can respond versus react to events and people. (O'Hagan 2016).

### **Police Reform Focused Towards a Mindfit Cop for India**

The Police force in India has to cater to a huge population base, with conditions that are quintessential to India, though the challenges remain the same as the Police force face the world over. With sophisticated technology, modernised

crime trends and techniques, the responsibility has increased, there is presence of an overactive media now a days, there is public scrutiny in every small act of Police, in addition to it, the Police officers are the first to visit the scene of crime, violence, dead bodies, arrests, child abuse, etc. All these challenges, research has proved, become instrumental in creating stress amongst officers which lead to several ailments, suicidal tendencies amongst the uniformed men and women, depression, sleeplessness, relationship issues etc. Researchers have proved that the mindfulness training has its positive effects on well being of those who received the training, in general and Police officers, in particular. The use of cutting-edge technology toward understanding mindfulness-an “inner technology” is elucidating new ways in which attention, awareness, acceptance, and compassion may promote optimal health in mind, body, relationships, and spirit (Tan, 2015). The National Institute of Clinical Excellence has advised Mindfulness-based cognitive therapy for the treatment of recurrent depression. (Booth, 2018)

The ability to think calmly under fire is the hallmark of great leadership. The training and deployment of this skill involves paying attention, on purpose, in the present moment, non-judgmentally (Zinn, 1990). The more you bring quality of attention to your breath, the more you strengthen the parts of your brain involved with attention and executive control, principally the prefrontal cortex (Tan, 2015). Recent research provides strong evidence that practicing non judgmental, present moment awareness (mindfulness) changes the brain. In a study of participants who completed the eight week mindfulness program, it was observed that there was a significant increase in the density of their grey matter. (HBR, EI Series, 2017).

Countries like the US and the UK are already introducing mindfulness training for the Police officers in their respective Police Academies and are experiencing its positive effect. Though, it is too early to comment on the percentage of

benefits that are derived from the mindfulness training, however, the positive effects cannot be negated.

All these challenges do have an impact on the mental well being of Police officers in India too. Hence, under the umbrella of Police Reforms, it becomes imperative for the policy makers to have a considerate view on these lines and put in effort to not only train the Police officers to be physically fit and mentally strong, but also train them to be mentally fit so as to have a force that has not only physically fit, but also a mentally fit force, i.e. a force that has Mind-fit cop.

### **PRACTICAL IMPLICATIONS WITH RESPECT TO POLICE OFFICERS, POLICE DEPARTMENT AND SOCIETY**

Having a Mind-fit cop will have its own benefits. It will have its positive effects on not only Police officers but Police department as well as society, at large. A Mind-fit cop will be able to deal with day to day stress in a better manner. Stress is an inherent ingredient when it comes to policing, hence it will always be there, though, it can be managed well with well planned training to the Police officers. This will help improve well being of officers, at the same time, applying mindfulness in day to day life will have its effect on improving public image of the Police, thereby the department. Police is frequently blamed for being harsh to general public, or non considerate, however, an emotionally intelligent, mind-fit cop would be in a better position to understand others and deal effectively. Hence, society will also be benefitted.

### **LIMITATIONS OF THE STUDY**

The researchers could not find any such study or research paper focusing on mindfulness training for the Police officers in India. Though, much work has been done and is being done world over with respect to Police and mindfulness, but researchers in India have yet to take up a full-fledged study on the concept.

## FUTURE RESEARCH

As mentioned above, the researchers of the current study have designed a two stage research; the primary is the current one, in which extensive review of literature has been done to get an insight of mindfulness training specific to Police. The stage two would be on actually conducting the training on mindfulness for the cops and study its effects. Though, this is the plan of the authors of this paper, however, in addition, future research can be undertaken by others too.

## DISCUSSION

This is a conceptual paper based on review of contemporary literature on Mindfulness practices and its impact on the well being of the Police officers. The job of a Police officer is considered to be very challenging, stressful and quite often emotionally draining. An officer who has to deal with several challenges simultaneously has to bear the cost of its negative consequences on his/her health and well being, research has proved. Hence recent trends and practices with respect to Police officers were studied to find out if any attempt is being made to address officer well being concerns. In a comparative study of countries like UK and US, it was found that the Police departments are adopting Mindfulness practices for the Police officers to ensure their well being.

This paper addresses several health and well being concerns of Police officers and its remedies. Mindfulness practices and its dedicated training to the Police officers has been found to be an effective remedy.

Police officers in India face several potential life threatening as well as emotional challenges which are stressful and have direct impact on their well being. Since mindfulness is being adopted at several places, globally, for the well being of the Police officers, and has positive effects; it has been recommended through this paper to adopt Mindfulness training for the Police officers in India too.

**Funding:** The authors did not receive any financial

support for this research.

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# Gender Issues in Policing: Perspectives and Perceptions



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## ABSTRACT

This article provides insights into the roles, challenges and perceptions of women police personnel and gender issues around them. The article is based on the discussions and reflections among IPS and senior CAPF officers, moderated by academic and subject matter experts in the field, as part of the Vertical Interaction Course for Police Officers on Leadership Development held at the Tata Institute of Social Sciences, Mumbai, in December 2016. Apart from highlighting the evolution of the role of women police in India, the article analyses how gender guides the interactions within the police service. It critiques the traditional values and practices which influence the work culture and fixes women in their reproductive and nurturing roles. It points at the dichotomy between women as equal colleagues in the force and the need for the force to be more conscious of the specific gender needs. The article highlights the concerns faced in handling gender issues and possible suggestions towards creating a more inclusive and gender aware police service.

**Keywords-** Gender issues, Policing, Police Training, Vertical Interaction.

## INTRODUCTION

Gender based analysis is a systematic way of looking at social roles in society allocated on the basis of sex. It provides a framework for distinction between how men and women are differentiated on the basis of control over needs, access to resources, decision-making, etc. To study any component related to women, gender analysis is very important. Women play a key role in society, economy, and polity, and it is unfair to narrow their identity to the home sphere alone. This article focuses on women in the police force and their journey towards achieving equal opportunity status in the police force and in society. It highlights the difference in treatment in

terms of infrastructure, facilities and incentives to women in the police force.

According to the Seventh United Nations Survey, the percentage of women police in India is 2.2 per cent, being the lowest in Asia and this reflects the patriarchal foundation of the system. Although there is 33 per cent reservation for women in the police force in recent years, yet there are shortcomings in achieving this objective. At the societal level, women are not given equal treatment, taunted on the basis of their sex, and sexual harassment is very common in the form of physical and verbal abuse leading to stress and trauma. The dichotomy in facilities provided for their male counterparts denies them their rights

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### Author's Intro:

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at the workplace.

The article begins with an overview of women's position in the work sector and the dynamics that impact on their position in society. This is followed by the historiography of women in the police force to understand the context in which women work in the police system. The paper presents the findings from group discussions of police officers that participated in the Vertical Interaction Course co-organized by the Centre for Criminology and Justice, School of Social Work and the Nodal Centre for Excellence in Human Rights Education, School of Law, Rights and Constitutional Governance at TISS from December 19 to 23, 2016.

### **WOMEN AND WORK**

With the increase in the socio-economic development in the country, there have been many changes in terms of industrial markets to technological innovations. This has increased the employment opportunities for both women and men. With educational and employment opportunities, more women began participating in the economy and this has led to increasing autonomy and freedom for women. However, they continue to play dual roles of taking care of the household and their work responsibilities, which has led to a double burden for them. Myrdal (1962) distinguishes two main phases of this development. In the initial phase only women who were unencumbered by family ties entered the employment market but in the second phase an increased number of women began to combine family responsibilities and job responsibilities. This resulted in women working more in more jobs, which reinforced their nurturing and caring roles. Mahajan (1982) mentions that there are certain occupations where neither the nature nor the structure of work is congruent with family roles of women and one is also stigmatized. There are jobs that require women to work with men as to remain out of the house for long periods and at odd hours. Such jobs as in the police force which women have increasingly taken and which involve longer working hours and break male bastions in

the work world. The change of such gender roles brings about conflicting role expectations (Kapur, 1969).

### **HISTORIOGRAPHY OF WOMEN POLICE**

To understand the status of women in police in the present day context, the historicity is very important as history influences the present day practices and stereotypes. According to Ghosh (1981), the journey of women in police has undergone three important phases. The first phase was when the police department wanted women who would frisk female prisoners and there were hardly any other powers that they enjoyed. Later, in the second phase, women were employed to protect women and juveniles from anti-social elements. In this period, there was a minor acceptance of women police but it was very limited. In the third phase, there was no distinction in the work of male and female police and women began to be recruited for all kinds of duties.

In the Indian context, the need for women officers was first seen during the labor strike in Kanpur, 1938 (Ghosh, 1981). Travancore in 1939 also appointed woman head constables and these officers were seen as equal to male police staff (Ghosh, 1981). Mahajan (1982) points out the need for women officers during and post-independence period, as there were many women in distress and to provide them with safety and security, the need for women police was realized. Also, during this phase, women actively participated in the freedom movement, whereby the need for women police was felt to handle women agitators. Later, there were enactments of laws on children and women like the Children's Act and the Suppression of Immoral Trafficking Act, where the role of women police was considered essential. These developments emphasized the requirement of women police and further facilitated the entry of women in the police force.

In most countries, when women entered the police system, there was strong opposition due

to existing stereotypes. They were criticized and shamed due to the change in gender roles and their acceptance within and outside the system was limited. But these hurdles further motivated women to join the force (Brown, 1997). There is an increasing trend of women entering the police system and this has promoted a major change in the form of separate women police wings in almost all state police forces. Also, women victims of violence prefer to approach female police officers, as there is a perception that male police are not sensitive enough towards women's issues. One of the innovations in this regard has been the setting up of special cells for women, attached to police stations where social workers provide socio-legal guidance and counseling to women victims of violence and work in collaboration with the police to ensure gender justice to service delivery to the victims. This initiative, which was started as a field action project of the Tata Institute of Social Sciences in 1984 in the Mumbai Police Commissioner's Office, has now become a scheme of the Maharashtra Government whereby such special cells have been set up across the state at the district and block levels. The TISS continues to be part of the monitoring and review process of the scheme. The TISS has also helped this project to spread to other states thereby providing much needed relief and support to violated women across the country.<sup>1</sup> These cells have shown better results, more reporting, and timely intervention due to the sensitivity of women officers.

## REVIEW OF LITERATURE

Since the 1970s, the role of women in policing has been observed. Some studies have centered on issues that women face in the male dominated fields and the rest have focused on the abilities of policewomen (Sherman, 1975). Women have faced discrimination and opposition for entering the police system, being a male dominated service. Brown (2000) highlights how women face opposition even in the present day as both their male counterparts and some sections of

the public show resistance. Further, he cites examples of United States and Europe where the police observed a conflicting situation by involving women police in the service. Such type of conflict resulted in sexual harassment, gender discrimination in assignments, promotions, and a general lack of concern for integrating women in police departments. In this context, it becomes important to examine potential barriers to their promotion and success (Lonsway, 2002).

Female officers face both internal and external disadvantages as highlighted by Schulz (2003), in terms of negative evaluations by male training officers, supervisors, and policies or supervisory biases that put women out of the high-profile assignments. Morash (1995) elaborated on the stress in the workplace in the form of subgroup status and sex jokes that results in gender discrimination and a high incidence of resignation by women police. Morash includes the external disadvantages like the dichotomy between work and family roles and this has influenced the promotion and job satisfaction process. The above issues not only bring down the confidence of women but also make their work very challenging.

Aleem (1991) mentions that there are only two books written on women police. One is by Mahajan (1982) and the other is by Ghosh (1981). She has researched on the working conditions of women police in Andhra Pradesh and she feels that the distribution of women police in the state and country is not rational. She believes that women police should be allotted independent powers and responsible jobs. She suggests that physical fitness should not be the only criterion for recruitment in the police force as women police can be helpful in cases of dowry deaths, juvenile delinquents and domestic violence and this can further lead to social change.

According to survey done by the Common Wealth Human Rights Initiative (2007), most women never even consider a career in uniform or law enforcement to begin with due to their misunderstanding of the nature of the job,

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<sup>1</sup> <http://www.tiss.edu/view/11/projects/all-projects/special-cell-for-women-and-children-maharashtra/>

resistance from family or the aggressive and authoritarian images portrayed in the media. However once hired women face discrimination, sexual harassment or even peer intimidation and they often lack the necessary role models or mentors to help them move up the ranks. In fact, the attrition rate of women in police, and especially at the level of constabulary is the highest of all the government jobs in the country, not to mention instances of women leaving the IPS - the top tier of highly horizontally stratified police force- which is considered an elite and prestigious vocation. This is obviously due to the discouraging and negative atmosphere, peer pressures and gender issues.

Ravindran Nair (1989) opines that women police officers serve as social workers in uniform and he explains it by giving the example of Kiran Bedi. Bhardwaj (1976) in a study of forty-five women police has found out that they are in the job not only for economic necessity but also for their immense liking for the position especially when working with offenders. She mentions that to improve the relationship between law enforcement officials and the community, policewomen should be made available for the people for personal consultation.

Bhardwaj (1976) explained the need for women police officers and emphasized a change in the role of women police. She stated changes in socio-economic and political conditions and rise in women and children offenders necessitated an increase in women police.

Om Raj Singh (2005) opines that protection of women regardless of their class, caste or age is the crying need of the hour. Even women who are accused of crime or under arrest are entitled to the preservation of their dignity. The law of the land must take cognizance of this universal truth. During arrest and remand of women, policewomen must be present. All over the world, along with the changes taking place in societies, the roles and goals of policing are also changing. The police role thus is continuing to develop with multiplicity of function from purely law

enforcement to that of a more varied role of public service. In the new era of police, work known as police social welfare emerged in the early decade of the present century.

### **METHODOLOGY OF THE STUDY**

The article is based on the experiences, reflections and discussions of IPS and senior para-military police officers during the Vertical Integration Course on Leadership Profile organized by the Centre for Criminology and Justice, School of Social Work, and the School of Law, Rights and Constitutional Governance, Tata Institute of Social Sciences, Mumbai, from December 19 to 23, 2016. The Bureau of Police Research and Development, MHA, GOI sponsored the course. The participants were divided into five groups and asked to discuss among themselves leadership challenges to gender aware policing in the civil and para-military forces. The paper attempts to theorise the problems faced by women in the police force and suggest the steps required to provide address the challenges.

### **OBJECTIVES**

To understand gender and its interplay in the police force.

To explore the various aspects of gender policing in rural and urban spaces.

To highlight the terrain and task force duties in BSF and CRPF in terms of efficiency in engendering the tasks.

To analyze the response of the police force in dealing with gender concerns.

To study the best practices by the forces in context of gender aware policing.

Data was collected on the basis of information gathered through presentations made by the participants divided into five groups. Observations and suggestions made by the participants during the presentations were also incorporated in the paper.

## **PARTICIPANT PROFILE**

The participants were from across the country serving in Indian Police Service (IPS) cadre and senior para-military police officers, also known as Central Para Military Forces. There were 23 participants in the one-week course out of which 2 were female officers. Since most of them were senior level officers, they had enormous experience in the field of policing. The age group was 40 and above based on their years of work.

The officers' rank ranged from Additional Director General of Police to Superintendent of Police rank. Two officers were of Additional DG rank, two officers were of Inspector General of Police rank, two officers were of Assistant Inspector General of Police rank (one of them female), three officers were of Deputy Inspector General of Police rank, three officers were of Senior Superintendent of Police rank, six officers were of Superintendent of Police rank (one of them female), one officer was of Deputy Superintendent of Police rank, and one officer was of the rank of a Colonel.<sup>2</sup>

## **FINDINGS**

The participant's defined gender as the state of belonging to a particular sex based on societal and cultural issues and not on the basis of biological differences. Identity is an important element that makes a woman more suppressed as she is in a position of subordination due to the cultural and social conditioning. Her work responsibilities sometimes force her to work in remote areas during odd hours, which lead to role conflict between professional and domestic roles.

The issues faced by women police in the para-military forces pertain to their identity. Women officers sometimes have to work out of their familial comfort zone, either because they are posted in remote border areas or have to work on odd hours of the day. While trying to understand the role of women as homemakers, the dilemma not only emerges from the society but also from

the women themselves. Issues like extreme weather situations, high physical endurance and night duties in isolated areas create a gender divide in the police, as male police resent the fact that women are given easier duties. Duty adjustments have been incorporated based on gender needs, separate infrastructure for women to live and washroom facilities, helpline for women personnel and sexual harassment committee, and crèches for women working in the force are some of the best practices currently being followed. But for sustainability of such practices frequent follow-ups has to be ensured.

Lack of infrastructure like toilets, provisions such as bullet proof jackets, boots and helmets not specifically made for women were some technical problems highlighted pertaining to provisions faced by women. There is a need for gender based provisioning of such items in the police force.

Presence of women police encourages women complainants to report cases since women officers can relate to them. It acts as an antidote to male dominated mindsets that lead to violence against women.

Many participants felt that talent/merit should be the main basis for recruitment in police. This would encourage equal treatment to women within the force. But it should also be kept in mind that men need to be more sensitive to the specific needs of women.

Women police should be trained together with male police and allocation of duties should be made gender neutral; while at the same time, keeping in mind some gender specific needs of women. Women need to be also given special training to make them comfortable and open up to their male counterparts. Similarly, male police need to be trained and oriented to develop better working relations with their female counterparts.

Many women are not in their comfort zones that they can share their problems with the male superior officers. There could be many a reason

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<sup>2</sup> Two officers' ranks could not be confirmed as the participants' list maintained at TISS could not be accessed due to the COVID 19 lockdown.



for this but eventually; it is a loss for the police force if women officers are not able to function properly. Counseling facilities should be provided to increase confidence level of women police.

In rural areas, women tend to be more oppressed, and cases reported are also fewer due to structural barriers. Thus, as a safety net, there should be more women police posted in every police station as per the current guidelines of the Supreme Court. Women police have shown extremely good performance in the rural areas but they do not usually prefer to stay in these postings, as it is difficult for them to get suitable accommodation.

The idea of women police stations is a good concept but both male and female police need to be posted in these police stations to deal with the issues of isolation. Separate stations can bring about ease of access for women complainants but differential postings on the basis of gender would lead to a lack of coordination within the force and widening the gap in understanding each other's issues.

## CONCLUSION

With an increasing number of women joining the police force, there is a need to restructure the male dominated police department, keeping in mind the cultural and social positioning of women, so that they are able to perform their duties efficiently and without being viewed in lesser terms. The discussions during the course brought out the fact that women play an important role in dealing with different kinds of crime and law and order issues. It is therefore crucial to be aware of their gender specific needs and their role as professionals. There is a need for structural modification in the police in the form of sexual harassment committees, separate washrooms and changing rooms, better equipment suited for women, paternity leave, and duty adjustments to enhance their efficiencies. These structural reforms along with gender awareness among fellow male officers would provide better coordination within and among the police service. Gender equality

and equity is necessary not only to protect women but also to unleash their energies and productive capabilities.

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# Occupational Heat Exposure of Female Police Personnel: Its Implication of Climate Change and Undermine Issue



The Indian Police Journal  
@BPRD, MHA  
BPRD Publication  
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## ABSTRACT

Effect of excessive heat exposure of working personnel affects the working capacity in prolonged physical activity and creates a number of physical imbalances like heat stress, heat syncope, heat stroke etc. There is little information available on how the change in climate affects the exposed human body. The impact of workplace heat exposure on behavioural and physiological activities and on the working capacity of female police personnel is the target issue of this study. First, we recorded their anthropometric parameters and then recorded perceived health problems via interviews of police personnel by the General Climate Change Questionnaire for Female Police Personnel. From that study, it might be concluded that female cops undergo through a heat-stressed environment throughout their duty hours in hot and humid environments and feel more heat stressed. More than eighty-four percent of the female cops experience stress during the work along with heat stress, whereas menstrual problem also plays a key role in increasing stress and physical condition.

**Keywords:** Heat stress, Police Personnel, Climate Change, Female Cops

## INTRODUCTION

The healthy human body maintains its internal temperature around 37 °C. Variations, which are usually less than 1°, occur with the time of the day, level of physical activity and psychological state. Physiological state and functions start to lose their stability because of excessive environmental heat exposure,

which is also reflected in the work capacity. The

changes in the climate of the earth, which already has observable effects on the environment, will create a long-term effect on nature. Heat stress is one of the important stresses, especially in hotter regions. Under the conditions of climate change, there will be an increase in short-term temperatures. This increase in temperature is a threat to the exposed working environments; because the increasing air temperature causes

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prolonged heat waves and gives more direct heat exposure to the affected population. Police personnel, who are continuously exposed to the hot environment, are prone to suffer in heat exposed illnesses, such as heat rashes, heat cramps, heat exhaustion, and heat syncope or heatstroke<sup>1</sup>. Female police personnel, who are exposed to prolonged heat, may develop some heat-related illness. The aim of this study is to investigate whether there is any critical issue which develops in them due to increased heat exposure caused by climate change.

## REVIEW OF LITERATURE

There were so many studies being performed on the occupational stress of traffic police personnel. As thermal stress is an important factor, heat stress results in physiologic responses of increased temperature, increased heart rate and increased sweating<sup>2</sup>. Environmental temperature, humidity and solar radiation are factors contributing to heat stress. The wet bulb globe temperature (WBGT) is an index of heat stress that incorporates these three factors<sup>3</sup>. This standard provides a simple convenient method, and uses the wet bulb globe temperature (WBGT) heat stress index to assess hot environments<sup>4</sup>. A recent convenient study on occupational heat exposure on traffic police was performed in Ahmedabad, Gujarat<sup>5</sup> it found a clear risk of heat stress for traffic police workers in June and July, particularly hotter times at traffic junctions in Ahmedabad. An exploratory study was performed about sources of occupational

stress in police personnel in North India<sup>6</sup>. A study was conducted to evaluate the cardiovascular status of police officers, working in different police stations in the Hooghly district of West Bengal<sup>7</sup>. After analyzing data, they found that police officers suffer from more cardiovascular risk factors than the general population. Since the occupation is a major determinant of health, traffic cops face multiple occupational hazards<sup>8</sup>. The hazardous traffic fumes contain a variety of pollutants such as particulate matter (PM), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), ozone, etc., all of which can cause respiratory problems and other systemic diseases including cancer<sup>9</sup>. Many studies in the past had been documented about impaired respiratory function in traffic cops. Respiratory morbidity is higher among traffic cops than in natural citizens<sup>10</sup>. Traffic police personnel are always exposed to traffic fumes, which causes the highest risk of air pollution. Some works were previously done on the heat exposure of traffic police personnel, such as despite improvements in traffic control measures, rapid industrialization and increasing traffic in developing countries have and will continue to worsen outdoor temperature, noise, and air pollution exposures in environments. As a result, traffic-related environmental exposures are alarmingly increasing concerns among the public health research and policy community. Traffic police personnel face multiple occupational hazards since they are continuously and simultaneously exposed to vehicular emissions,

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noise from vehicle honking, and harsh weather conditions<sup>11</sup>. Multiple studies have concluded that traffic police are highly stressed. A number of factors have been attributed to stress among traffic police, namely inadequate rest periods, lack of communication with the family members, long duty hours, inadequate leave periods, heat stress and climatic factors during the duty hours etc. These studies have shown that there might be an effect of occupational heat exposure on female police personnel. Studies on Police officers of West Bengal were performed to measure the level of oxidative stress and ergonomic stress between them,<sup>12,13,14</sup> (Saha A, Sahu S & Paul G et al. 2010), (Saha et al. 2012), (Saha et al. 2014).

**AIMS AND OBJECTIVES**

The aim of this study is to know about the physiological effects of heat stress on the body of female traffic personnel with the implication of climate change.

**MATERIALS AND METHODS**

To study the impact of heat stress due to increased temperature caused by the change in climate because of global warming, we first measured their anthropometrical parameters via anthropometric instruments and weighing machine. Then the subjects were interviewed by a general climate change questionnaire for female police personnel. Assessment of blood pressure was performed by the use of Sphygmomanometer and stethoscope. After collection of all data, data were analyzed by the personal computer with IBM SPSS V23 software.

**RESULTS AND DISCUSSION**

It was found that the maximum (84.62%) percentage of subjects considered their job as moderate type, whereas it has been found that most (71%) of the female cops have to spend at least twelve hours at the work area.

Information was collected in details about the physical conditions of female cops, where almost 80% of cops have their systolic blood pressure below 120 mm/Hg and almost 65% having their diastolic blood pressure below 80mm/Hg. Almost 69% of subjects have their pulse below 72 beats/ mins.

From the Table 1, it has been suggested that the female cops are suffering from following types of physical disorder during their duty. Among them, maximum were affected by a headache and heavy sweating.

**Table 1: Assessment of Climate change questionnaire**

Table 1	Questionnaire Study
SL No.	% of Positive[Yes]response
1	80.77
2	26.92
3	57.69
4	88.46
5	19.23

It has been summarized that the most vital physical ailments of the female cops are shown in Figure 1.

**Fig 1: Physical ailments felt by most female traffic cops (in Percentage)**

After observing the details of the physical ailments felt by the female traffic cops, it was important to check whether they feel heat stressed or not during their extreme exposure to the environment. For this purpose, a stress dummy-variable was created by adding the six different physical ailment variables. As the entire response variable is binary in nature (yes =1 and no =0), thus by calculating the sum of the response we obtain the aggregate of all the physical ailments experienced by individual female traffic police. The variation of the variable stress dummy is shown in Table 2.

11 Afnan F Ibrahim, Alshebli A Ahmed, Ali I Salih (2015): Heat Stress among Traffic Police Officers at North Khartoum Locality, Sudan , International Journal of Science and Research (IJSR) ISSN (Online): pp 2319-7064, 4(3).

**Table 2: Percentage distribution of the variable Stress Dummy:**

Stress Dummy	Percentage
1	3.85
2	11.54
3	26.92
4	26.92
5	26.92
6	3.85
Total	100

In Table 2, the percentage of the response was maximum when the sum was greater than 2,

which implied most of the female cops at least suffered from 3 types of physical problems during their exposure to environmental.

It was also observed from the questionnaire that more than 84% of the female cops experienced stress during the work.

A proper statistical method was used to analyze and to find the significance of those observed values. The association was checked off the various controls that were chosen for analysis with the dependent binary variable 'HEATSTRESS\_FEMALECOP'.

**Table 3: Association between Body Mass Index and Heat stressed of Female Cops.**

HEAT STRESS OF FEMALE COPS	BMI Class Interval					Total
	17 - 20	20 -23	23 -26	26 -29	29 and above	
No	8%	4%	4%	0	0	16%
Yes	4%	40%	24%	4%	12%	84%
Total	12%	44%	28%	4%	12%	100%

Cramér's V = 0.5253 (The association is very high)

It was concluded from Table 3 that, the association between BMI and heat-stress of female cops was very high, so it might be concluded that there was a relationship of BMI with the heat-stress of female cops, such as an increased in BMI caused more heat-stress to female cops, whereas less BMI caused less effect.

**Table 4: Association between Heart rate and Heat stress of Female Cops**

HEAT STRESS OF FEMALE COPS	Heart rate Class			Total
	Below 72	72	Above 72	
No	12%	4%	0	16%
Yes	56%	4%	24%	84%
Total	68%	8%	24%	100%

Cramér's V = 0.3404 (Moderate association)

It was found from Table 4, as the association between heart rate and heat-stress of female cops was moderate, so it might be concluded that there was little change in heart rate with the heat-stress of female cops, such as an increased heart

rate caused a moderate change in heat induced stress effects.

**Table 5: Association between Breaks in Hours and Heat stress of Female Cops.**

HEAT STRESS OF FEMALE COPS	BREAKS(HR.)			Total
	0.5	1	2	
No	0	4%	13%	17%
Yes	26%	4%	53%	83%
Total	26%	8%	66%	100%

Cramér's V = 0.3498 (Moderate association)

From Table 5 it was concluded that, the association between break hours and heat-stress of female cops was moderate, so it might be concluded that there was a relationship of breaking periods with the heat-stress of female cops, such as increased in time of breaks or break-period caused less heat-stress on female cops, whereas less break time caused more effect on heat stress.

**Table 6: Association between Systolic blood pressure and Heat stress of Female Cops.**

HEAT STRESS OF FEMALE COPS	Systolic Pressure			Total
	Below 120	120	Above 120	
No	16%	0	0	26%
Yes	68%	8%	8%	84%
Total	84%	8%	8%	100%

Cramér's V = 0.1905 (Very weak association)

It was found from the Table 6 that, the association between systolic blood pressure and heat-stress of female cops was very weak, so it might be concluded that there was almost no relationship of systolic blood pressure with the heat-stress of female cops. So, change in systolic blood pressure might not affect the feeling of heat stress of female cops.

**Table 7: Association between Diastolic blood Pressure and Heat stress of Female Cops.**

HEAT STRESS OF FEMALE COPS	Diastolic blood Pressure			Total
	Below 80	80	Above 80	
No	8%	8%	0	16%
Yes	56%	20%	8%	84%
Total	64%	28%	8%	100%

Cramér's V = 0.2324 (Weak association)

From Table 7, it was found that, the association between diastolic blood pressure and heat-stress of female cops was weak, so it might be concluded that there was a very little chance of change in heat-stress of female cops as in a change in a diastolic blood pressure. So, there may be a very little or almost no change in feeling of heat-stress with the change in diastolic pressure.

**Table 8: Association between Working times (Hr.) and Heat stress of Female Cops.**

HEAT STRESS OF FEMALE COPS	WORKING TIME(HR.)				Total
	7	8	10	12	
No	0	0	0	17%	17%
Yes	9%	4%	17%	53%	83%
Total	9%	4%	17%	70%	100%

Cramér's V = 0.3035 (Moderate association)

It was concluded from Table 8 that, the association between working hours and heat-stress of female cops was moderate, so it might be concluded that there was a relationship of working periods with the heat-stress of female cops, such as decreased in time of work or work-period caused less heat-stress to female cops, whereas an increased in working time caused more heat stress.

From the study, it was also found that during their menstrual period, their duty became more stressful as they could not get a sufficient place to change their sanitary pads, which made them more stressed during duty hours. Also, because of this problem, many of them faced rashes and other infective diseases spreading among them.

**Recommendation<sup>12,13,15</sup>:** - From this study can be seen that female cops face more problems during hot environments and climate and most exposure in the open environment, it can be recommended that-

Sufficient amount of drinking water or electrolytes should provide during the duty hours.

They should use a shed or equipment like umbrella to protect themselves from the direct exposure to the sunlight.

Duty hours should be in rotating shifts, or the break periods might be broken down in two or three small breaks.

Regular physical exercise and a healthy diet are recommended for good digestion.

**CONCLUSION**

It was concluded from the study that, female cops go through a heat-stressed environment throughout their duty hours in hot and humid environments and feel more heat stressed than other civilians because some of those who had a

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high BMI felt more stress. More than eighty-four percent of the female cops experienced stress during work. Physical ailments felt by female traffic cops were mostly heavy sweating, dizziness and headache. It was also found that BMI had a high relevance to the level of heat stress of the female cops, that was, higher the BMI, felt more heat stress. Increased working time created more heat stress, whereas increased break time created less stress. There was no relationship found between Systolic blood pressure and heat stress, but diastolic blood pressure caused a little rise in heat stress. Along with heat stress, the menstrual problem also played a key role in increasing stress.

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# Integrated Traffic Fine Management System –Implementation in Bidhannagar, Kolkata and Review



The Indian Police Journal  
@BPRD, MHA  
BPRD Publication  
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## ABSTRACT

The system of penalising traffic offenders is an important aspect in traffic management. Often it is an avenue of corruption which mars the image of the police. The Integrated Traffic Fine Management System (ITFMS) is an Information Technology (IT) based initiative which revamps the entire traffic penalty structure. ITFMS in Bidhanagar City Police has brought transparency and efficiency in enforcing traffic discipline. The people have found the system fair and accountable. The payment of fine using the system is done instantly which saves time. The percentage of realisation to that of fine imposed has increased substantially. The induction of this technology has been cost effective. The devices are provided by the bank and the software is developed by State e-governance Mission Team (SeMT). However, the devices used are not free from glitches and errors. There are maintenance issues which require a dedicate team of experts. The data generated is hosted at the state data centre which ensures its safety and privacy.

## KEY WORDS

Integrated Traffic Fine Management System (ITFMS), Information Technology (IT), Bidhannagar City Police, transparency, efficiency, effectiveness, metropolitan, Point of Sale device, Payment Gateway, State e-Governance Mission Team (SeMT), State Data Centre, Challan, SMS, Debit/ Credit card, Video analytics.

## INTRODUCTION

Bidhannagar is the suburban area of Kolkata. It has IT hubs, residential and commercial areas, tourist attractions such as parks, water bodies, Golf course, amusement park, central malls, Wax Museum etc. Vital installations such as the NSCBI\*\* Airport, government offices, research and educational institutes also fall under its jurisdiction. There has been a rapid growth in real

estate activity in Bidhannagar particularly in areas adjacent to the airport.

There has been an increase in the population density of the area and a consequent increase in vehicular traffic. One of the objectives for the creation of Bidhannagar City Police was to deal with traffic issues effectively.

The people in Bidhannagar are engaged primarily

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in service sector. They expect the metropolitan police to be a modern and efficient organisation. The Information and Communication Technology (ICT) has a remarkable effect in bringing these qualities in an organisation. The idea is to bring efficiency, effectiveness and transparency by infusing technology in the process. The Integrated Traffic Fine Management System (ITFMS) is an IT application to digitise the system of imposing penalties/fines for traffic violations. It makes the imposition and collection of fine transparent and eradicates corruption.

Before the implementation of ITFMS, the traffic police officers used to seize the offender's driving licence and issue challan to them. The drivers would then deposit the fine in a bank account under relevant head or pay the fine online. The drivers would get their driver licenses from the traffic officers of concerned traffic guard/ office on showing the receipts of payments made by them. The drivers felt harassed by the effort and the time involved in this process. In this system since the payment is on the spot, there is no need to seize the drivers' licences. In addition to making the process of prosecution of traffic violation simpler, ITFMS records all transactions and creates data base for reference.

### **1.1 THE DEVICE AND ITS FUNCTIONING:**

It involves a Point of Sale (POS) device connected via internet for generating challan through a mobile application. The device is issued to a traffic police officer who logs into it with his name, GPF number and password. While issuing a challan, the officer enters the particulars of the offending driver such as the driver's name, address, phone number and email address, the nature of offence, relevant section of law and the amount of fine is selected from the drop box. The device has a high resolution camera to take pictures of the vehicle and the documents produced by the driver before the prosecuting officer. The device also has a feature that enables an offender to make payment instantly by Credit/ Debit card as the system is integrated with an online Payment Gateway. The

system immediately alerts the driver by SMS when the fine is paid and the device generates a receipt after the fine is paid.

The system is integrated to the 'Vaahan' database of State transport department. It helps in identifying the vehicle and its owner in citation cases.

### **1.2 DATA GENERATION AND ITS ANALYSIS:**

The data collected through the system is stored in a centralized server. The data base provides for offense, location and month wise analysis of the traffic violations. The Geo Positioning System helps in monitoring the locations of traffic officers detailed for duty. It also helps in making a real time analysis of the vulnerable spots of violations which could lead to accidents. As the details of the drivers and vehicles are uploaded it is easy to identify repeat offenders. If the project is scaled up and implemented in the entire state, it would be easy to identify repeated traffic offenders in the state. It generates information which could be valuable in crime investigation. The security of the data base is a concern which is addressed by hosting the data in the state data centre.

The data of ITFMS is stored in the State Data Centre of government of West Bengal. The Department of IT and Electronics, takes care of the security of the data in the state data centre and gets it audited regularly. Thus the expenses on hosting and protecting the data are saved.

The implementation of the fully integrated online traffic fine management system enables faster 'challan' generation, real time system update of database, SMS notification to the offender and analytics to plan and manage traffic.

### **2.KEY COMPONENTS OF ITFMS**

The following is the list of key components of the ITFMS with a brief description of their features and functions.

#### **2.1 INTEGRATED POINT OF SALE DEVICE:**

- a. Connected all the time to the centralised

database through SIM / Wi-Fi

Internet connection;

- b. Device has 4G internet speed facility for fast access;
- c. Device supports Dual SIM with dual IMEI Number. Two SIMs from different Service providers can be used with one as backup;
- d. Android based device - easy to handle;
- e. Camera for capturing images for each transaction;
- f. Debit / Credit Card based payment facility for collection of On-the-spot fine;
- g. Printing facility for Traffic Fine challan is available.

### **2.2 MOBILE APPLICATION SOFTWARE:**

- a. Version controlled Installation on the Integrated POS device;
- b. Integrated with State Vehicle Database of Road Transport Office ('Vahaan' database of the state of West Bengal) for fetching details of the vehicle involved;
- c. Exhaustive List of Traffic Violations under State Rules and Central Act;
- d. In-built Matrix of Fines / Penalties against each Violation;
- e. Auto calculation of Fine /Penalty amount.

### **2.3 TYPES OF CHALLANS:**

On the Spot payment of fine,

Seizure of documents not required due to recording and data capturing facility,

Citation cases can be integrated,

Remote Payment option is available.

### **2.4 PAYMENT GATEWAY:**

Web based Online Payment facility to citizens through Payment Gateway facility;

### **2.5 CENTRALISED DATABASE AT STATE DATA CENTRE:**

- a. Centralised database for all Police Authorities at State Data Centre,
- b. Real time update of entire data from POS device / online system to centralised database is available.

### **2.6 SMS NOTIFICATION TO OFFENDERS:**

Real time SMS based notification with Challan details on Mobile number of the Offender;

Web based download/printout of the Challan for records purpose.

### **2.7 SECURED ACCESS TO DEVICE BY TRAFFIC GUARD OFFICERS:**

Single device for each individual Traffic Guard officer:

Access to device secured through Linking of device with individual officer ID;

Login Password based access to device.

### **2.8 IMAGE CAPTURING FACILITY:**

There is a high end built-in camera for capturing every transaction image;

Image linked to each transaction stored in centralised database.

### 2.9 ENCRYPTED DATA:

All data generated through POS device / online system is encrypted and secured before storage in centralised database server.



Figure 1

### 2.10 REPORTING AND ANALYTICS:

Device Wise Reports and Analytics is available;

Consolidated Reports at various levels is readily available.

Decision making is made easy through reports based on Period / Device / Traffic guard / Vehicle Type / Sections of Law / Types of challan / etc.

### 2.11 GEO LOCATION CAPTURE:

Facility to capture the Latitude and Longitude of the spot of transaction is available.

### 3. INTEGRATED TRAFFIC FINE MANAGEMENT SYSTEM1

#### 3.1 THE DEVICE

ITFMS is an IT application installed on a hand held device. It is simple to use. A traffic officer can select the details required for traffic prosecution directly from the drop down boxes. There is an inbuilt list of offence and corresponding fines as per the Motor Vehicle Act and rules. The offender can make a spot payment by using credit/ debit card which works also as a Point of Sale device. The data generated is stored at the State Data Centre using mobile data services as illustrated above.

### 3.2 TRAFFIC E-CHALLAN WORK FLOW IN ITFMS

#### 3.2.1 STEP WISE WORK FLOW IN TRAFFIC CHALLAN APPLICATION

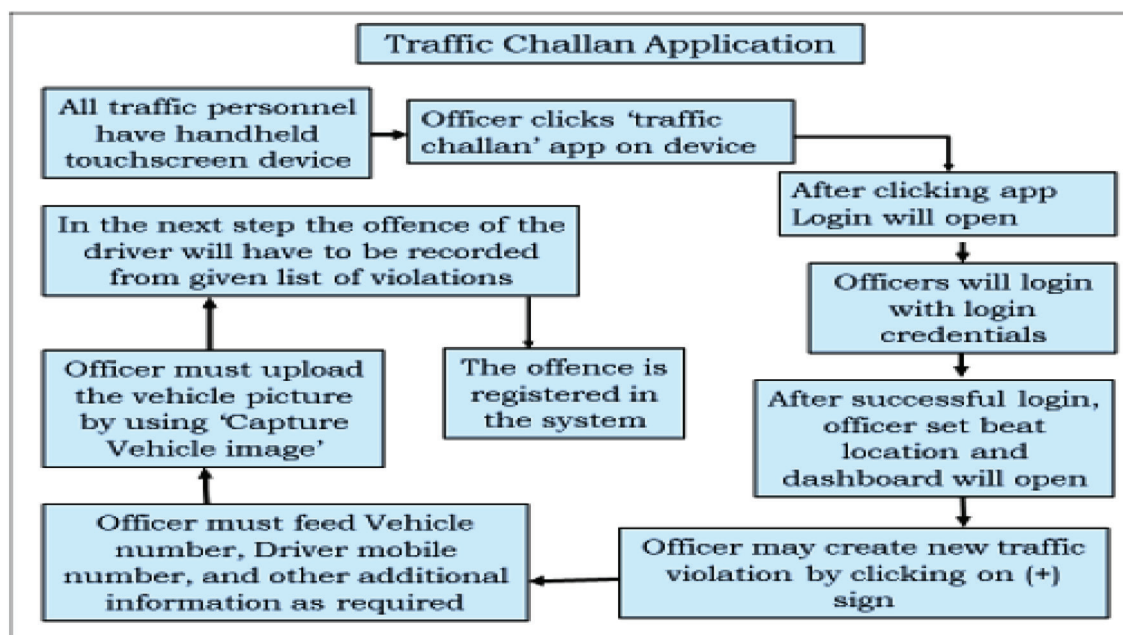


Figure 2

The device has login features using password. Every officer has to provide his name and GPF details to login into the device. This ensures accountability of officers and prevents misuse of the device. The officer can select details of jurisdiction such as traffic guard, traffic beat and location. The vehicles and drivers' details are entered and are checked against the integrated

data base of West Bengal 'Vaahan' of the state's transport department. The images of the vehicle and documents can be captured with a camera of the device for documentation. The officer has to select the relevant offences from the drop down box which is applicable to a violation case. The offence is registered in the database.

### 3.2.2 SEIZURE AND SPOT PAYMENT IN ITFMS

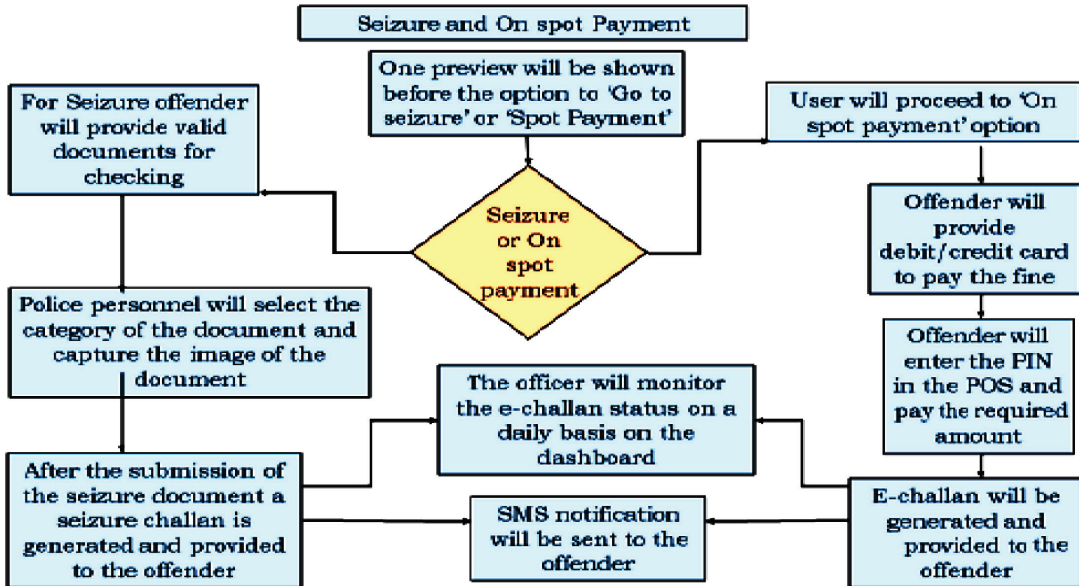


Figure 3

The device anticipates two situations. First, when the driver is carrying a Credit/ Debit card and willing to pay the fine with it and second, when he is not carrying a Credit/ Debit card and agrees to pay the fine online or at a designated bank. The device is used as a Point of Sale machine and the payment of fine is done instantly. A receipt is

generated having details such as nature and place of offence and the fine. The receipt is sent to the offender through an SMS to his mobile phone. In both the cases i.e. on spot payment and remote option payment, the offender is notified about fine paid and pending payment of fine respectively.

### 3.2.3 REMOTE PAY OPTION FEATURE

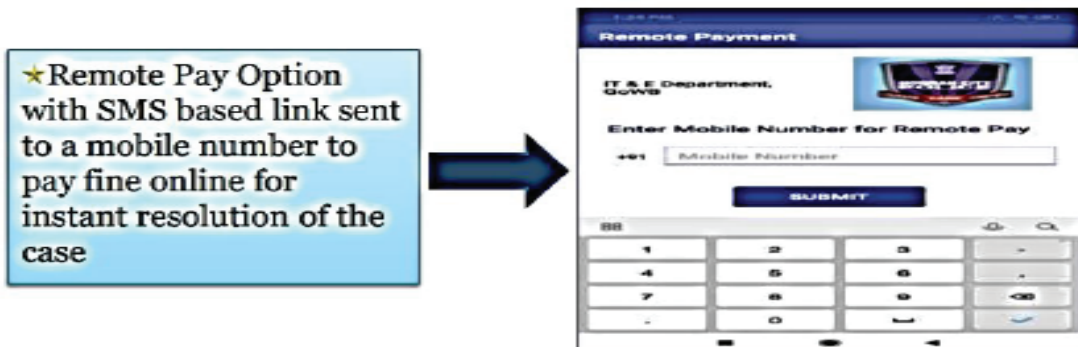


Figure 4

In case of remote payment, the officer takes picture of the documents such as driving license, registration papers and other valid papers. A picture of the number plate of the vehicle is

also taken. A challan is generated and given to the offender. The offender is reminded regularly through SMS for the payment. A traffic officer can monitor the status of pending e- challan on the dashboard in the control room or at the traffic guard.

### 3.2.4 CITATION OF TRAFFIC FINE THROUGH ITFMS

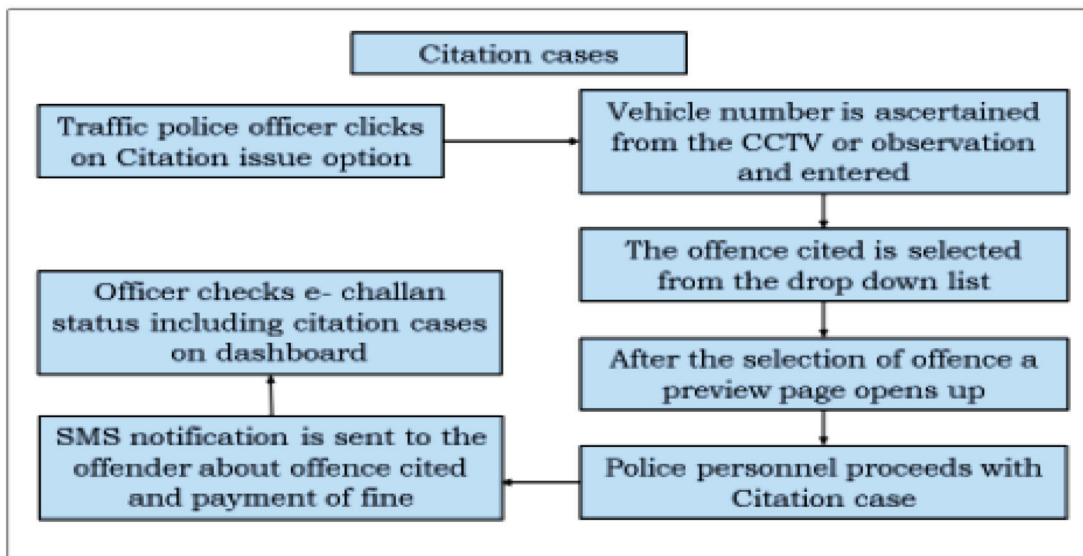


Figure 5

The Citation cases increase the efficacy of the traffic penalty system. An officer observes the traffic violation on CCTV or directly on the spot, notes down the vehicle number and fetches the details including ownership details from a data base. The West Bengal VAAHAN is the data base of the state’s road transport department which is integrated with the ITFMS. The details of offence and fine are notified to the owner’s mobile phone obtained from the data base. The status of such pending e – challans is monitored on the dashboard.

The system helps in indicating the citation cases done through fixed cameras called the Red Light Violation Detection (RLVD) cameras at traffic signals. The details of challan and the offence can also be seen as evident from the figure above. The system has the facility to convert the unpaid fine cases to court cases.

### 3.3 GPS LOCATION OF THE DEVICE AND SUSPENSION OF DRIVING LICENSE

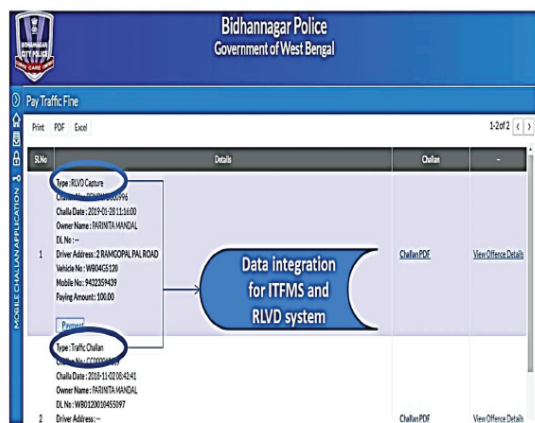


Figure 6

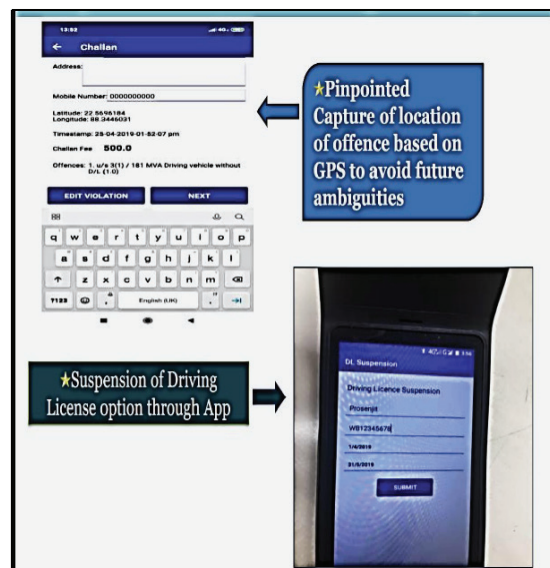


Figure 7

There is a Geo Positioning system built in the device to track and ascertain the movement of officers on duty and the places where fines were imposed. It helps in analysing the vulnerable spots and for taking remedial measures.

The suspension of driving license is a measure taken under Section 19 of the Central Motor Vehicles Act, 1988 and Section 3 & 5 of the West

Bengal Motor Vehicles Rules ,1989. The same is integrated in ITFMS.

**3.4 VISUAL ANALYTIC DASHBOARD**

A visual dashboard is available to view details of the prosecutions. It enables to analyse nature of traffic violations in a particular area, categories of vehicles involved in violation. The dashboard also helps in preventing accidents by analysing the violations. Snapshots of few dashboard sections are given below.



Figure 8

**4. COST INVOLVED IN IMPLEMENTATION OF ITFMS**

- i) The POS device is provided by the bank involved. The holding period of the fine amount by the bank is one day i.e. the bank deposits the fine amount in the treasury on the T+2 day.
- ii) The Mobile App is developed by in-house team of IT and Electronics department of Government of West Bengal. The App is provided to Bidhannagar City Police without any cost.
- iii) The cost of SMS about the transaction sent to the offender is borne by the Police Authorities.

## 5. INTERPRETATION OF IMPACT OF THE ITFMS SYSTEM 2

### 5.1 COMPARITIVE DATA FOR THE YEAR 2018 HIGHLIGHTING FINE REALISATION THROUGH 'CHALLANS' ISSUED MANUALLY AND THROUGH ITFMS

2018									
Month	Total No. of Prosecution			Fine Imposed			Fine Realised		
	Compound	E-Challan	Total	Compound	E-Challan	Total	Compound	E-Challan	Total
Jan	13996		<b>13996</b>	2653100		<b>2653100</b>	2338850		<b>2338850</b>
Feb	16058		<b>16058</b>	2828950		<b>2828950</b>	2001100		<b>2001100</b>
Mar	22059		<b>22059</b>	4472650		<b>4472650</b>	3341700		<b>3341700</b>
April	22883		<b>22883</b>	4204500		<b>4204500</b>	2995700		<b>2995700</b>
May	28713		<b>28713</b>	4906650		<b>4906650</b>	4249650		<b>4249650</b>
June	27198		<b>27198</b>	4609850		<b>4609850</b>	4253400		<b>4253400</b>
July	19461	6156	<b>25617</b>	3644150	1145550	<b>4789700</b>	2921450	1145550	<b>4067000</b>
Aug	10495	12222	<b>22717</b>	1891050	2218950	<b>4110000</b>	1769450	1614850	<b>3384300</b>
Sep	7161	15555	<b>22716</b>	1359950	2681750	<b>4041700</b>	1293300	2190500	<b>3483800</b>
Oct	8557	15037	<b>23594</b>	1671600	2595100	<b>4266700</b>	1355750	2027550	<b>3383300</b>
Nov	10125	18806	<b>28931</b>	1950050	3111500	<b>5061550</b>	1459100	2785100	<b>4244200</b>
Dec	8948	20182	<b>29130</b>	1631750	3223350	<b>4855100</b>	1687950	2763600	<b>4451550</b>
<b>Total</b>	<b>195654</b>	<b>87958</b>	<b>283612</b>	<b>35824250</b>	<b>14976200</b>	<b>50800450</b>	<b>29667400</b>	<b>12527150</b>	<b>42194550</b>

Table 1

\*Compound- regular challan issued manually.

### 5.2 COMPARITIVE DATA FOR THE YEAR 2019

2019									
Month	Total No. of Prosecution			Fine Imposed			Fine Realised		
	Compound	E-Challan	Total	Compound	E-Challan	Total	Compound	E-Challan	Total
Jan	6463	22565	<b>29028</b>	1202900	3525700	<b>4728600</b>	1225200	3100350	<b>4325550</b>
Feb	4830	17539	<b>22369</b>	924600	2668850	<b>3593450</b>	1780700	2317050	<b>4097750</b>
Mar	8407	22296	<b>30703</b>	1658200	3676450	<b>5334650</b>	1125750	3150650	<b>4276400</b>
April	7004	22703	<b>29707</b>	1320600	3891600	<b>5212200</b>	1130500	3347950	<b>4478450</b>
May	5612	14471	<b>20083</b>	1110950	2340250	<b>3451200</b>	875200	2074100	<b>2949300</b>
June	4708	14098	<b>18806</b>	886450	2253600	<b>3140050</b>	757100	1974950	<b>2732050</b>
July	4471	13119	<b>17590</b>	792650	2200300	<b>2992950</b>	723450	1866200	<b>2589650</b>
Aug	3029	12595	<b>15624</b>	616200	2044250	<b>2660450</b>	599800	1735750	<b>2335550</b>
Sep	3860	8946	<b>12806</b>	483300	1632700	<b>2116000</b>	433500	1348750	<b>1782250</b>
Oct	3164	6367	<b>9531</b>	601650	1322700	<b>1924350</b>	419450	1123200	<b>1542650</b>
Nov	3349	10249	<b>13598</b>	626810	2014700	<b>2641510</b>	513250	1552500	<b>2065750</b>
Dec	3516	9932	<b>13448</b>	676200	2015600	<b>2691800</b>	474150	1594500	<b>2068650</b>
<b>Total</b>	<b>58413</b>	<b>174880</b>	<b>233293</b>	<b>10900510</b>	<b>29586700</b>	<b>40487210</b>	<b>10058050</b>	<b>25185950</b>	<b>35244000</b>

Table 2

The above tables indicate that the amount of fine realised is higher in case of e- challan through ITFMS. Higher fine realisation is indicative of efficiency of the ITFMS.



## 6. BENEFITS OF THE ITFMS

The traffic fine system is a penal system. There are many stakeholders involved in this activity. First, the State, which has to ensure public order, safety and smooth traffic on the road. On the one hand it wants to use the fine system to ensure traffic discipline and on the other it doesn't want to inconvenience the citizens doubly by causing harassment to them. The second stakeholder is the police. They want their resources to be utilised effectively to prevent unnecessary work on already overworked policemen. There is a need to improve the image of the police which have the responsibility of enforcing the law. The third stakeholder is the citizen himself. He needs to see the fine system as a corrective one rather than a system which harasses him.

The following are the benefits listed

### To the government

- a. Minimal errors in levy of fines;
- b. Real time update of data in centralised server minimising chances of loss of data;
- c. Reduced scope of malpractices;
- d. Real time payment to government exchequer through digital channel.
- e. Reduced expenses in maintaining the records.

### To the citizens

- f. Real time notifications
- g. Zero travel for payment of fines;
- h. All transactions recorded by the device reducing indiscretion of the field officers;
- i. The licenses are not seized pending payment of fine.

### To the police

- j. Reduced manual effort of writing and recording traffic fine;
- k. The device is portable and easy to use;
- l. The summary and sum total of fines imposed readily available;
- m. It saves time and manpower;
- n. The dashboard data helps in tracking repeated

offenders, stolen vehicles and e- challans pending for payment.

- o. It boosts the image of the police as being tech savvy and modern.

## 7. SHORTCOMINGS AND CHALLENGES AHEAD

### 7.1 SHORTCOMINGS:

The ITFMS is a machine dependent system. It is susceptible to technical glitches and errors. The following is the list of its shortcomings:

The device blacks out occasionally as it happens in cell phones.

There are connectivity issues in poor mobile network coverage areas. Though the machines could be used offline and the data gets uploaded when they are online, the effectiveness is reduced.

Also the online payment does not work sometimes, but such instances are rare. In such a situation the offender has to deposit the fine to the banks which means reverting to the old system which is time consuming.

the offenses to be charged are to be selected from the drop box. If a wrong offense is selected from the list and confirmed, then there is no way to rectify it. In the manual system, the field officer used to write the relevant penal sections and the offense. As the offense need to be selected in a machine, there is possibility of choosing the wrong section of law which makes the legal action void. Such instances occur due to sun glare on the machine during the day or due to clumsiness on the part of the officer issuing 'challan'.

### 7.2 CHALLENGES

The traffic police men should overcome their aversion to use of technology and adopt to change. They must be trained intensively and motivated to use the devices regularly.

At present the banks have provided the machines and the e governance team of IT department is overseeing the ITFMS. A dedicated allocation of government fund is required to procure, maintain and upgrade the devices and the system. There should be a dedicated team of software personnel to run the system and to handle the technical

challenges associated with it.

### **8. CONCLUSION:**

The ITFMS is a significant technological intervention in traffic fine management. Its implementation in Bidhannagar reduced the burden of work on the traffic policemen. The documentation is made simpler as the system generates data automatically. The police officers need not write the details of 'challan' issued in a register. The police officers save time by downloading the data from the device to a computer. Also the data is instantly available at the traffic control room for analysis and necessary intervention.

The old system of traffic fine imposition was perceived by the people as an arbitrary and exploitative system. The introduction of ITFMS could change this perception. The people found the process easy for paying the traffic fine. The SMS notification in their mobile phone assured them of the fact that the fine paid has been deposited in the government account. The traffic policemen are now perceived as modern and competent officers who can use technology effectively. They are seen as professional and accountable officers. The qualities of transparency and fairness in the system are brought by the use of ITFMS.

The system can be scaled to the entire state with integrated database with minor 'App' level changes and database configuration. The cost of storage of data and its protection is ensured by storing the data in the State Data Centre. There is immense utility of integrated data base in traffic management and in crime investigation as well. The system could be introduced throughout the country by integrating the national database in the system.

The cost involved in the implementation of ITFMS is less compared to the old traffic fine system. It has brought efficiency in collection of fine. The offenders save time required to visit a bank to pay the fine. Use of electronic device cuts costs on use of paper and the stationery. The maintenance of records in the data base is hassle free and saves space.

The training of policemen in ITFMS or in any IT application should be done periodically. They will discuss the advantages and shortcomings of the new system. The problems could be solved and the issues could be resolved in those training sessions. The devices and the software could be customised to suit local requirements. It is necessary to take away their fear of and aversion to technology. Once they adapt to the new system they find it useful and convenient.

The technical problems in the devices could be easily addressed by a team of experts. Once the system is scaled up to the entire state then a government policy of procurement and maintenance will help in ensuring standardisation.

The application of Information Technology (IT) has made life simpler in the 21<sup>st</sup> century. There is hardly any sphere of human activity which has remained untouched by it. The implementation of ITFMS in traffic management is both intuitive and inevitable due to qualities inherent in it. The traffic police of all states will have to adopt the system eventually.

### **REFERENCES:**

[https://negd.gov.in/sites/.../SeMTWestBengalPresentationtoMeitY1.5.2019\\_final.pdf](https://negd.gov.in/sites/.../SeMTWestBengalPresentationtoMeitY1.5.2019_final.pdf).

Statistics provided by Bidhannagar City Police.

### **Credits:**

Mr.Gyanwant Singh IPS, Additional Director General of Police (Law and Order), West Bengal formerly the Commissioner of Police Bidhannagar City Police for encouraging the implementation of ITFMS.

Mr.Abhijeet Singh Kadian IPS formerly posted as Deputy Commissioner of Police(Traffic) in Bidhannagar City Police for playing a key role in implementing the initiative.

Dr.Abhishek Roy, Head of State e- Governance Mission Team, Department of Information Technology and Electronics, Government of West Bengal for the technical support.

# Examination of the Scanned and Printed Documents with the Help of their Digital Images Uploaded on the Recruitment Portal: - Illustration through Forensic Examination of Recruitment Scam Cases



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

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Amit Koul<sup>3</sup>

## ABSTRACT:

Nowadays various recruitment agencies are adopting an online recruitment process for employment of staff for various posts in order to maintain an equilibrium between need and demand. In this process candidates are asked to upload their signatures, writings, photos, etc. on the website/recruitment portal of the recruitment agencies and thereafter the recruitment process in respect of candidates commences. Whenever there is a doubt of impersonation, the various agencies forward signatures/writings for identification of the person actually appeared in the examination to forensic laboratories. In most of the cases scanned and printed signatures on some relevant recruitment documents could not be opined conclusively due to their poor quality and unusual dimensions which might be due to uploading of the signatures in a limited area of interest in the requisite place of the online application forms, etc. This hinders the process of examination of the same. In the present research work, the experts not only establish the identity of hard copy signatures with their digital image stored in CD/DVDs, etc. provided by the recruitment/investigating agencies but also examine the same regarding their authorship or otherwise.

## KEYWORDS:

Superimposition, Reproductions, Exemplars, Impersonation, Transparencies, VSC-8000.

## INTRODUCTION:

India is one of the largest populated countries in the world, at present India has largest youth population. In order to provide employment to such a large youth population is a challenging task for the government in terms of a recruitment process. To cope with the heavy flood of the

application forms, their scrutiny, examination in due course of time as well as to save the manpower, energy, paper and time, various recruitment agencies are adopting an online model for a recruitment process. This process involves filling up the online application form, uploading of signatures/writings, photos and other credentials of the candidate in accordance with the prescribed

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size and dimensions directed by the recruitment agencies on their online recruitment portal. After that, the process of scrutiny of documents is initiated and selected candidates are called for a written examination/interview, etc. At the time of examination candidates appear and put his/her signatures physically on the attendance sheet or other documents which are examined by the invigilators at that point in time. Sometimes question arises whether the real person appeared for examination or not and if there is any doubt regarding his/her candidature, the documents submitted by the candidates at various stages of recruitment process are forwarded for forensic document examination.

All the signatures can be examined and opined except the poor quality reproduction signatures on the printout of online application form, etc. submitted by the agencies for forensic examination, the reproduction copy documents are the product of scanned and printed process<sup>1</sup>. Which, when examined microscopically shows an image of poor line quality as well as unusual compression or stretching in the actual size (which might be due to uploading of the signatures in a limited area of interest in the requisite place in the online application forms, etc.), due to this all the writing characteristics/ attributes could not be established and experts are not in a position to express conclusive opinion on such signatures. In this present work, the authors have specified the ways to opine on such type of signatures as well as different problems associated with them.

#### **METHODOLOGY:**

The documents which are submitted for examination should be carefully and thoroughly examined. Signatures/writings on online application form whose print out are generally supplied by the forwarding authority is analyzed in the light of following points.

1. What type of printing technology is involved in the reproduction documents?
2. Whether these print-outs are legible enough in order to study the various writing characteristics/attributes essential for handwriting examination and comparison?
3. Whether their overall as well as relative size is in accordance with other original signatures (Questioned /Standards) in all dimensions?

Generally, the printouts supplied for comparison are the production of scanning and printing technology. Laser or inkjet printers<sup>2</sup> are mostly used for the above mentioned purpose.

If a laser printer is used by the recruitment agencies, the signature thus produced when examined under magnification shows deterioration in the line quality as the toner generally is unable to produce a high quality image due to its limitation of printing scanned signature also the customized settings (Dpi, quality, etc.) of the printer and scanner used also acts as a catalyst in such deterioration. If an Ink Jet printer is used by the recruitment agencies, the signatures thus produced when examined under magnification shows deterioration in the line quality as the ink droplets coming out of the nozzles spread on the paper randomly and produce an image of poor quality from the forensic examination point of view. In both the above mentioned cases, the forensic document expert is unable to study the various writing characteristics/attributes<sup>3</sup> essential for handwriting examination and comparison. In order to solve such type of cases and express a conclusive opinion, the soft copies of the signatures uploaded on the server of recruitment agencies by the candidates play a significant role. The document expert in such conditions may ask for the soft copies of the signatures uploaded on

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1 Jan Seaman Kelly & Brian. S Lindblom, (2006). The Scientific Examination of Questioned Documents, Second Edition, New York, CRC Press.

2 David Ellen, (2005). The Scientific Examination of Documents, Methods and techniques, Third edition, New York, CRC Press.

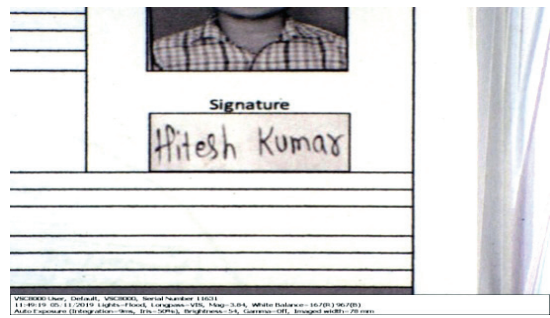
3 Wilson, R. Harrison, (1981). Suspect Documents, their scientific Examination Chicago, Nelson-Hall.

the server/online portal. In present cases, the soft copies were asked and their digital images stored in CDs/DVDs were examined/consulted using various computer assisted softwares with the supplied questioned reproduction document and original standards.

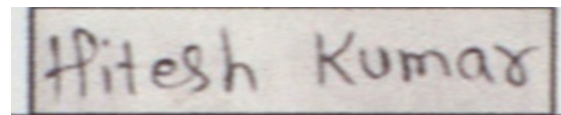
The size of the digital image stored in CD/DVD is made similar to the size in respect of X & Y dimensions of the reproduction signature supplied as a hard copy by using softwares such as MS paint, MS Picture manager, Picasa, etc. In order to prove/confirm the relation between the supplied digital image of signatures stored in CD/DVDs and the reproduction signatures supplied as a hard copy, the method of superimposition by latest available gadgetries such as VSC-8000 or conventional method of transparency are used. If both the images of print out of digital image stored in CD with rectified dimensions using aforesaid computer assisted softwares superimposes<sup>4</sup> on the image of reproduction<sup>5</sup> signature supplied initially as a hard copy for examination we can very much establish the source of the later image as "No two signatures of a person can be exactly and precisely alike ". After that the various writing attributes/ characteristics are studied/consulted from the digital image<sup>6</sup> (if it is of good quality) and the scientific comparison of the signatures can be made with the supplied standards and a conclusive opinion can be framed as shown in CASE-1 and CASE-2.

CASE-1: Disputed reproduction signature (Fig 1) submitted for examination and comparison along with the original exemplars. The conclusive opinion on disputed reproduction signature supplied as hard copy (Fig:1) has been furnished (as given below and shown by Fig 1 to Fig 6).

4 A.S. Osborn, (1929). Questioned documents, Second Edition, Boyd printing Co. Albany.  
 5 SWGDOC Standard for Examination of Documents Produced with Toner Technology (ver. 2013-1).  
 6 [https://en.wikipedia.org/wiki/Digital\\_Image](https://en.wikipedia.org/wiki/Digital_Image)



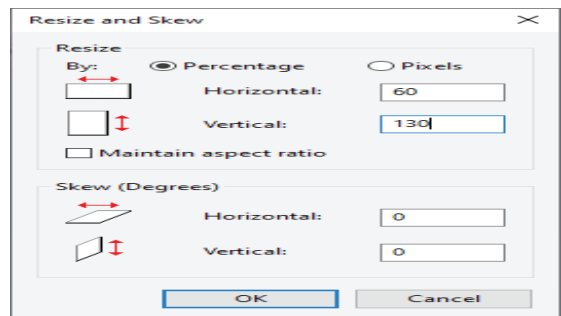
**Fig 1:** Reproduction document supplied as hard copy for examination.



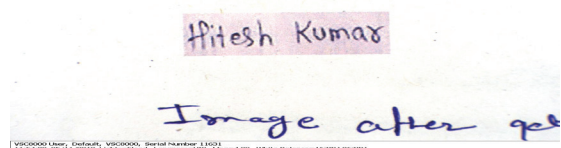
**Fig 2:** Close up view of reproduction document supplied as hard copy for examination under high magnification showing deterioration of line quality.



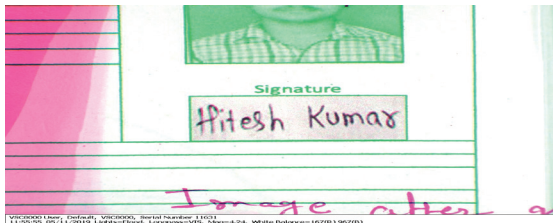
**Fig 3:** Supplied soft copy of image (stored in CD/DVD) opened in MS paint.



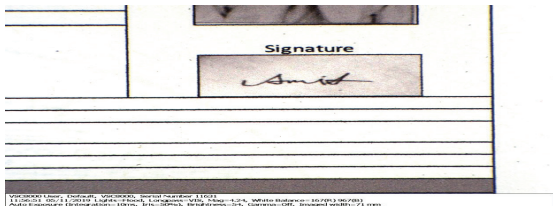
**Fig 4:** Dimensional/size adjustment of soft copy of image (Fig 3) using MS paint software.



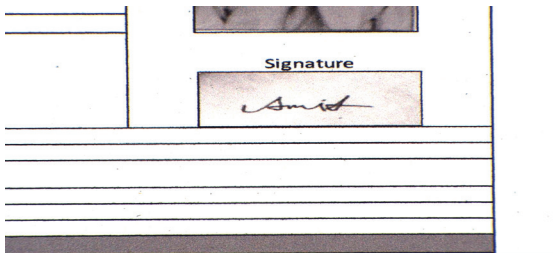
**Fig 5:** Image obtained after resizing wide X & Y dimensional adjustments.



**Fig 6:** Perfect superimposition of resized digital image (Fig 5) vis-a-vis reproduction signature (Fig 1) supplied for examination as hard copy establishing their common source.



**Fig 7:** Reproduction document supplied as hard copy for examination.

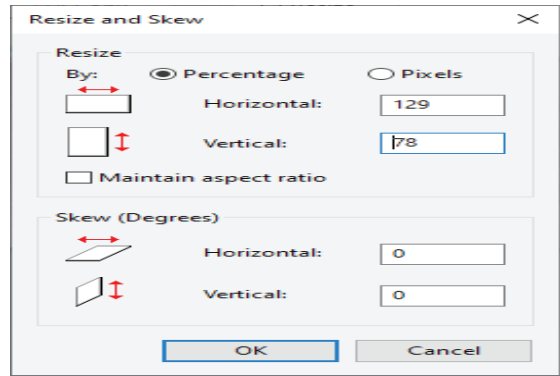


**Fig 8:** Close up view of reproduction document supplied as a hard copy for examination under high magnification showing deterioration of line quality.

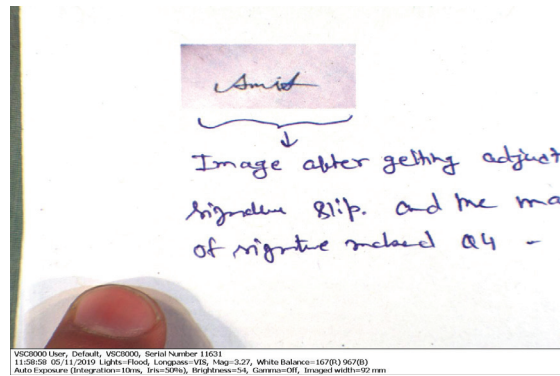
**CASE 2:** Disputed reproduction signature (Fig 7) submitted for examination and comparison along with the original exemplars. The conclusive opinion on disputed reproduction signature supplied as hard copy (Fig 7) has been furnished (as given below and shown by Fig 7 to Fig 12).



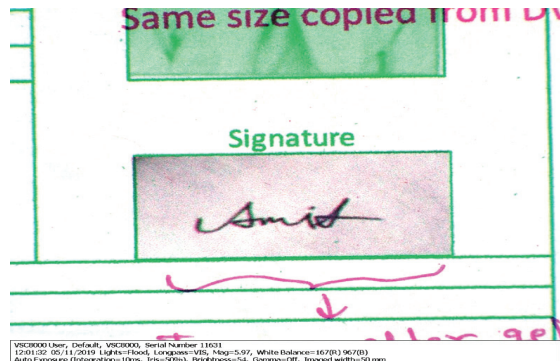
**Fig 9:** Supplied soft copy of image (stored in CD/ DVD) opened in MS paint.



**Fig 10:** Dimensional/size adjustment of soft copy of image (Fig 9) using MS paint software.



**Fig 11:** Image obtained after resizing vide X & Y dimensional adjustments.



**Fig 12:** Perfect superimposition of resized digital image (Fig 11) vis-a-vis reproduction signature (Fig 7) supplied as hard copy for examination establishing their common source.

**CASE: 3 (Limitations):** Disputed reproduction signature (Fig 13) submitted as hard copy for examination and comparison along with the original exemplars.

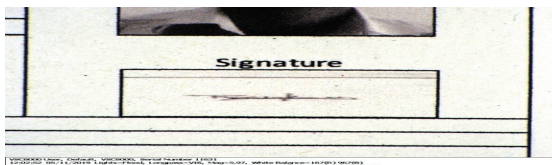


Fig 13: Reproduction document supplied as hard copy for examination (Blurred image).

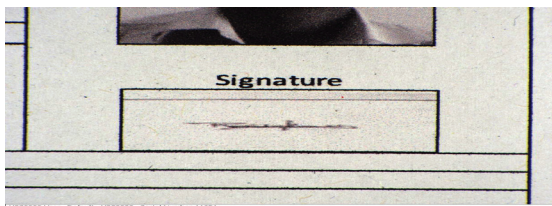


Fig 14: Close up view of reproduction document supplied as hard copy for examination under high magnification showing deterioration of line quality (Blurred image).

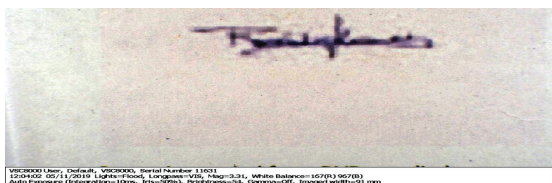


Fig 15: Image obtained from CD/DVD which is also of poor quality i.e no improvement in line quality, etc. (Blurred image).

### **OBSERVATION, INTERPRETATION & CONCLUSION:**

The hard copy of the reproduction signatures on various documents which were supplied for examination, when examined under high magnification (Fig 2/Case 1) and (Fig 8/Case 2) reveals deterioration in line quality therefore various characteristics/ attributes essential for examination could not be studied in order to frame a conclusive opinion. Hence the softcopy of the image of the signatures which were uploaded on the server of recruitment agencies (stored in CD/DVD) were consulted (Fig 3/Case 1) and (Fig 9/Case 2). These images were opened in computer softwares - MS paint and observed that there overall as well as relative size and dimensions are different than that of the hard copy signatures submitted for examination. Therefore, these

images were accessed and dimensional resizing were done in various computer assisted softwares like MS Paint<sup>7</sup>, Picasa, etc. using various mathematical calculations and images (Fig 5-Case 1) and (Fig 11-Case 2) thus obtained were exactly superimposing (Fig 6-Case 1) and (Fig 12-Case 2) with respect to their relative size, dimensions, alignment, slant, etc. of letters/strokes on their corresponding hard copy reproduction signatures (Fig 1-Case 1) and (Fig 7-Case 2) establishing the fact that the hard copy reproduction signatures and supplied soft copy of signatures stored in CD/DVD have been originated from a common source. Now the condition of strokes and other essential writing characteristics/ attributes were studied/ consulted from soft copy signatures and after comparison with exemplars conclusive opinions were framed. Therefore, it is strongly recommended that while dealing with such type of cases the forensic document expert must ask for the soft copy of the signatures uploaded on the server of the recruitment portal of agencies and after careful examination as mentioned above efforts should be made to deliver a conclusive opinion. Certain limitations (Fig 13 to Fig 15-Case 3) also occurs while dealing with such type of cases due to poor quality of reproduction signature supplied as a hard copy as well as soft copy of signature supplied in CD/DVD as shown above in limitations (Case-3).

**ACKNOWLEDGEMENT:** The authors are highly thankful to Dr. S.K. Jain, Director CFSL Chandigarh/ Shimla for his valuable suggestions and guidance.

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<sup>7</sup> <https://answers.microsoft.com/en-us/windows/forum/all/resizing-a-picture-in-paint/8a1e8841-66df-4cce-afa2-77d7e28eb19>

# Modern Theory of Punishment – An Analytical Study

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

## ABSTRACT

The object of criminal justice system is to protect the society against criminals by punishing them under the existing penal law. The principal object of punishment is the prevention of offences. To inflict punishment, different methods have been adopted in different countries at different times. The early law givers gave their variant opinions on the need of punishment to check criminal behaviour against the society. State should aim to protect society and reclaim the criminals by taking measures to prevent people from committing crimes. The various theories of punishment are - Deterrent theory, Retributive theory, Preventive theory, Reformatory theory and Expiatory theory. It is the settled principle that a person is considered innocent until proved guilty. The nature of proof requires that the evidence must prove beyond reasonable doubt the guilty of the person accused of various offences. The method of proof is through conduct of trial before a competent court. Once the court comes to a conclusion based on evaluation of the evidence admitted before the court, that the accusations are proved against the accused, then the court has to necessarily decide on the quantum of punishment to be awarded to the accused. In a criminal trial, the learned Judge has to consider the different theories of punishment while awarding the most appropriate punishment keeping in mind the various theories of punishment, he has to choose the exact punishment which is called for in the particular facts and circumstances of each case. At the time of imposing punishment, the learned Judge should consider two important factors which would shape the most appropriate punishment – (a) aggravating factors and (b) mitigating factors. The aggravating factors and mitigating factors have to be seriously assessed and properly balanced for fixing the appropriate punishment. These factors are generally considered by the learned Judge at the time of imposing punishment as these are the very important and vital variables. The punishment will be severe if the aggravating factors of a case are more and the punishment will be less or smaller when the mitigating factors of the case are less.

## INTRODUCTION

The various theories of punishment have their own objectives and each of them tries to justify its claim. After the eighteenth century, the theories of punishment have been changed when the humanitarian movement in Europe emphasized the dignity of the individual, as well as his rationality and responsibility. The quantity and

severity of punishments were reduced, the prison system was improved, and the first attempts were made to study the psychology of crime and to distinguish between classes of criminals. Whether punishment has any binding impact in the control of crime, is a debatable issue. Many types of sentences including death sentences have been executed but still then the crimes are on the rise.

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### Author's Intro:

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The paramount purpose of punishment is social control; grave suspicion arises, whether crime can be controlled by inflicting the punishment only. Punishment must be severe enough to act as a deterrent but not too severe to be brutal. Similarly punishments should be moderate enough to be human but cannot be too moderate to be ineffective.<sup>1</sup>

### MEANING AND OBJECT OF PUNISHMENT

The word punishment derives its origin from the Greek root “Pu” meaning to cleanse. In the same way Sanskrit term “Dam” means to check or to restrain and the term *Danda* means a stick, staff or rod; a symbol of authority and punishment. It has been justly remarked that it is needed as retribution, restraint and reformation.<sup>2</sup> The early law givers gave their variant opinions on the need of punishment to check criminal behaviour against society.

A ‘crime’ according to Salmond, is an act deemed by law to be harmful for society as a whole although its immediate victim may be individual. Murder injures primarily the particular victim, but its blatant disregard of human life puts it beyond a matter of mere compensation between the murderer and the victim’s family.<sup>3</sup> Those who commit such acts are proceeded against by the state in order that, if convicted they may be punished.<sup>4</sup> It is therefore, evident that the object of criminal justice is to protect society against criminals by punishing them under the existing penal law. Thus punishment can be used as a method of reducing the incidence of criminal behaviour either by deterring the potential offenders or by incapacitating and preventing them from repeating the offence or by reforming them into law-abiding citizens. To

inflict punishment, different methods have been adopted in different countries at different times. In ancient times the methods were generally severe all over the world and India was no exception to this. The usual forms of punishment employed were hanging, beheading, mutilation, impaling, throwing the convict to elephants or other ferocious beasts kept for this special purpose, or some other severe punishment regarded as appropriate to the offence.<sup>5</sup> For administration of criminal justice, punishment plays a very vital role. In fact, the concept of punishment has been a significant part of legal discourse in every legal theory.

### Punishment in ancient time in India

According to P.V. Kane ancient Smriti writers were quite aware of the several purposes served by punishment for crimes, though they do not develop a regular science of penology. The person wronged feels a great urge for revenge or retaliation and other men sympathize with that emotion. The individual, however could not, in civilized societies, take the law into his own hands and therefore, the state saw to it that the emotion for relation or revenge was to some degree satisfied by the adequate punishment of the wrongdoer.<sup>6</sup> In ancient India *danda* was considered to be a crucial constituent of legal and social system. Manu realized that maintenance of law and order would not be possible without an effective force behind it. According to Manu the essential characteristics of law is *danda*. It was significant punishment meant for violating various laws of society. These laws were framed and established by the ruling classes and on many points followed the principles of varna or class legislation. The ultimate sanction behind the exercise of the State Authority lay in the power of the sword which depended on the power of king.

According to Manu the king should impose

1 Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs. (March 2003). Report, at 169. Retrieved September 23, 2019 from [http://mha.nic.in/hindi/sites/upload\\_files/mhahindi/files/pdf/criminal\\_justice\\_system.pdf](http://mha.nic.in/hindi/sites/upload_files/mhahindi/files/pdf/criminal_justice_system.pdf)

2 Das, Sukla (1977). *Crime and Punishment in Ancient India* (p. 57). New Delhi: Abhinav Publications

3 Fitzgerald, P.J. (2000). *Salmond on Jurisprudence* (p. 92). Bombay: N.M. Tripathi Pvt. Ltd.

4 Ibid.

5 Banerjee, Dr.Tapas Kumar (1990). *Background to Indian Criminal Law* (p. 297). Kolkata: R. Cambray & Co. Pvt. Ltd.

6 Chakraborti, Dr. N.K. (2002). *Principles of Legislation & Legislative Drafting* (p. 295). Kolkata: R. Cambray & Co. Pvt. Ltd.

just and proper punishment on those who act unjustly, having due regard to the time, the place and circumstances under which the offence was committed, knowledge of law or understanding or education of the offender.<sup>7</sup> Punishment properly inflicted after due consideration, makes all people happy. It is inflicted without due consideration, it destroys everything.<sup>8</sup> If the king fails to punish all those who deserve to be punished, the stronger would roast weaker and as a result, the weaker section of society would suffer.<sup>9</sup>

Manu further opines that an individual is kept under control by the fear of punishment. There is hardly any man in this world who is guiltless. It is only through the fear of punishment, the people yield to the rule of law.<sup>10</sup> If the king fails in his duty to use the power of the state to punish the guilty, individuals with evil propensities would cross all barriers of law and cause injury to others and as a result, the people at large would suffer.<sup>11</sup> But in a place where the punishment is imposed on the sinners, the people will have peace and happiness.<sup>12</sup>

But the power to punish must be used in a proper manner after due consideration. The king who is well versed in Trivarga Siddantha (Dharma, Artha and Karma) and who is wise alone can be a proper inflictor of punishment.<sup>13</sup> The power of punishment cannot be exercised by persons who are not well experienced and knowledgeable. It can be imposed only by those who know Dharma fully. Any improper use of power of punishment is sure to destroy the king (State) himself.<sup>14</sup>

Repeating the idea of Manu, Yajnavalkya remarks that *danda* rules over all people, it protects them and remains awake when the guardians of law are asleep and it is regarded as dharma.

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7 Manusmriti VII-16  
8 Manusmriti VII-19  
9 Manusmriti VII-20  
10 Manusmriti VII-22  
11 Manusmriti VII-24  
12 Manusmriti VII-25  
13 Manusmriti VII-26  
14 Manusmriti VII-28

According to Narada wicked people should be punished by the king. As fire is not polluted by burning, soaking is not polluted by inflicting punishment on deserving criminals.<sup>15</sup> Katyana holds the view that the king is the protector of the helpless, home of the homeless, son of the sonless and father of the fatherless person. Thus it is the duty to protect the people from the evil doers and to restrain the delinquent by inflicting punishment commensurate with the wrong done. Brihaspati clearly pointed out that when the safety of many could be ensured by destroying a single offender; his execution was productive of religious merit.<sup>16</sup> Kamandaka repeated the ideas of Manu and Katyana when he said that *danda* should neither be too severe nor too mild but be just in accordance with the offences committed, the Nalamata Purana echoed the same idea that punishment should be inflicted upon the culprits in accordance with the gravity of crimes.<sup>17</sup>

## DIFFERENT THEORIES OF PUNISHMENT

The principal object of punishment is the prevention of offences. Punishment is inflicted as a method of protecting society by reducing the occurrence of criminal behavior. It is the recognized function of all civilized states that criminals or offenders be punished. State should aim to protect the society and reclaim the criminals by taking measures to prevent people from committing crimes. The various theories of punishment are as follows –

- 1) Deterrent theory
- 2) Retributive theory
- 3) Preventive theory
- 4) Reformatory theory
- 5) Expiatory theory

### 1. Deterrent theory

According to this theory, punishment should be inflicted in such a manner that it should

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15 Das, Sukla (1977). *Crime and Punishment in Ancient India* (p. 56). New Delhi: Abhinav Publications  
16 Ibid.  
17 Ibid.

deter or prevent not only the offender himself but also others. So the object of this theory is not only to prevent the wrongdoer from doing a wrong a second time but also to make him an example to other persons who have criminal tendencies.<sup>18</sup>

## 2. Retributive theory

According to this theory, the offender should be made to suffer in proportion to the injury caused to the victim. In primitive society, punishment was mainly retributive. The victim was allowed to take revenge against a wrongdoer. The principle of 'eye for an eye,' 'a tooth for a tooth,' 'a nail for a nail,' was the basis of criminal administration. The theory, therefore, underlined the idea of vengeance or revenge.

## 3. Preventive theory

This theory is based on the proposition 'not to avenge crime but to prevent it.' The preventive theory seeks to prevent the recurrence of crime by incapacitating the offenders. It suggests that prisonisation is the best mode of crime prevention as it seeks to eliminate offenders from society thus disabling them from repeating crime.

## 4. Reformative theory

According to this theory, the object of punishment is to reform criminals as to prevent him from committing the further crime. This theory seeks to bring about a change in the attitude of the offender so as to rehabilitate him as law abiding member of society. Reformatory theory condemns all kinds of corporal punishments. The modern criminal jurisprudence has emphasized that no one is a born criminal. Man turns into a criminal by force of circumstance like abject poverty and other circumstantial and environmental conditions and not by choice.

Reform the criminal and not punish him is the main object of this theory.

## 5. Expiatory theory

According to this theory if the offender expiates or repents for the commission of crime or misdeeds then he deserves to be forgiven and let off. Here expiation or repentance is treated as equivalent to punishment.

## VARIOUS JURISTS ON PUNISHMENT

According to Jeremy Bentham, punishment is evil in the form of remedy which operates by fear.<sup>19</sup> Bentham believed Punishment to be the chief end of the General Prevention. His opinion on Punishment is "All punishment is mischief; all punishment in itself is evil". If we could consider an offence which has been committed as an isolated fact, the like of which would never recur, punishment would be useless. It would only be only adding one evil to another. But when we consider that an unpunished crime leaves the path of crime open, not only to the same delinquent but also to all those who may have the same motives and opportunities for entering upon it, we perceive that punishment inflicted on the individual becomes a source of security for all. That punishment which considered in itself appeared base and repugnant to all generous sentiments is elevated to the first rank of benefits when it is regarded not as an act of wrath or vengeance against a guilty or unfortunate individual who has given way to mischievous inclinations, but as an indispensable sacrifice to the common safety. Bentham further said that if the evil of punishment exceeds the evil of the offence, the punishment will be unprofitable; he will have purchased exemption from one evil at the expense of another. According to Jeremy Bentham, the main object of punishment is to produce pleasure and prevent pain. Strictly speaking, punishment is in itself a pain. As suggested by Bentham, pain and pleasure are the great springs of human action. When a man perceives or supposes pain

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18 Mahajan, V.D. (2001). *Jurisprudence & Legal Theory* (pp. 136-137). Lucknow: Eastern Book Company

19 Bentham, Jeremy (1995). *The Theory of Legislation* (p. 167). Bombay: N.M. Tripathi Pvt. Ltd.

to be the consequences of an act he is acted on in such manner as tends with a certain force to withdraw him as it were from the commission of that act. If the apparent magnitude be greater than the magnitude of the pleasure expected he will be absolutely prevented from performing it. Bentham is considered to be the father of deterrent theory. Fundamentally, pleasure and pain are considered to be the basic premises of this theory. If people are deterred by punishment from doing things which may produce more pain, then the punishment is quite justified. If not, there is no scope of punishments or retribution for its own deeds. This theory also calculates how much of punishment would be adequate. It is that amount whose pain is measured by the pains of the actions it deters. According to Bentham, punishment when inflicted should not be more aggravating than the crime committed by the wrong doer. The 'pleasure' should exceed the 'pain,' otherwise the object of punishment would be frustrated.

Retributive theory is based on the assumption that causing pain to the offender or making them face other unpleasant consequences is right and proper. According to George Hegel, the great German Philosopher, punishment 'annuls' the crime. It aims at restoring the social balance disturbed by the offender. The offender should receive as much pain and suffering as inflicted by him on his victim to assuage the angry sentiments of the victim and the community.<sup>20</sup> George Hegel and Immanuel Kant criticized the utilitarian theory and supported the retributive theory which states that punishment is not means to be an end but end in itself.

The terms, 'command' and 'sanction' used by the John Austin, have important bearing upon the corporal punishment. According to Austin, 'command' is the wish or desire of the sovereign authority that the subjects shall do or refrain from doing a particular act, otherwise some evil will be inflicted. Whereas 'sanction' is the contingent evil which will be inflicted on a person who does

not obey the commands of the sovereign. Simply 'sanction' means punishment. So according to Austin, the command of the sovereign can only be obeyed if it is supported by punishment or dire consequence if the above stated command is not being followed.

H.L.A. Hart also suggested the concept of punishment. His nine essay on "Punishment and Responsibility" is the pioneer in this topic, and was published in the year 1968. Many important aspects on punishment are discussed here. In this publication he propounded that the general justifying aim of punishment is utilitarian which is protection of society from the harm caused by crime but justice requires that the application of punishment should be restricted to only those who have voluntarily broken the law.<sup>21</sup> He defends punishment as a system designed to reduce wrongdoing but at the same time to respect freedom, specially freedom to choose in the light of the legal consequences.

The Retribution is the oldest and perhaps most instinctive attitude towards a wrongdoer. According to it, the wrongdoer deserves punishment in order to 'pay' for his crime. In theory of punishment, Bentham suggested that the punishment should go with the crime. Various analytical jurists have faith in the sovereign; they have different opinions on punishment. Hart and Kant are the supporters of retribution, Bentham believed in rehabilitation whereas Austin is the supporter of administration of sanctions in order to obey the command of the sovereign.

### **PUNISHMENT UNDER INDIAN PENAL CODE & CRIMINAL PROCEDURE CODE**

Sections 53 to 75 of the Indian Penal Code, 1860 (in short IPC) describe the general provisions relating to punishment for different offences. Chapter III of the IPC titled 'Of Punishments' contains sections 53 to 60 dealing with different types of punishments including death sentence, life imprisonment and imprisonment for certain periods, whether the

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20 Qadri, S.M.A (2009). *Criminology and Penology* (p. 129). Lucknow: Eastern Book Company

21 *Ibid*, p.136

sentence should be served as rigorous or simple imprisonment and so on. Provisions relating to impositions of fines including provisions for alternative sentences, if the fines are not paid, are mentioned in sections 63 to 70 of IPC, nature of punishment for offences made up of several offences is provided for in sections 71 and 72. Solitary confinement as punishment and limits of its imposition are incorporated in sections 73 and 74. Section 75 provides for enhanced punishment for certain offences for repeat offenders.

A sentence of imprisonment in default, as per section 30 Cr.P.C., should not be in excess of power u/s 29 Cr.P.C. and should not exceed 1/4<sup>th</sup> of the term of imprisonment which the magistrate is empowered to inflict. However, it may be in addition to substantive sentence of imprisonment for the maximum term awarded by the Magistrate u/s 29. In case of conviction of several offences at one trial, as per section 31 Cr.P.C., the court may pass separate sentences, subject to the provisions of section 71 of the I.P.C. The aggregate punishment and the length of the period of imprisonment must not exceed the limit prescribed by section 71 I.P.C. According to section 354(3) of Cr.P.C. when the conviction is for an offence punishable with death or, in the alternative, with imprisonment for life or imprisonment for a term of years, the judgment shall state the reasons for the sentence awarded, and, in the case of sentence of death, the special reasons for such sentence. Section 360 of Cr.P.C gives a wide power to court to adopt a lenient view in respect of young offenders.

### **MODERN THEORY OF PUNISHMENT**

The stage of punishment is the final process of the criminal justice system. It is the settled principle that a person is considered innocent until proved guilty. The nature of proof requires that the evidence must prove beyond reasonable doubt the guilt of the person accused of various offences. The method of proof is through conduct of trial before a competent court. Once the court comes to a conclusion based on evaluation of the evidence admitted before the court, that

the accusations are proved against the accused, then the court has to necessarily decide on the quantum of punishment to be awarded to the accused.

Sentencing aspects that are relevant to consideration by courts are more or less laid down by courts all over the world except where the statute provides a minimum mandatory sentence. Factors that influence sentencing process have been clearly settled by a series of court pronouncements. For imposing substantial punishment many aspects are taken into account. Similarly for reducing the quantum, factors which mitigate are also taken into account. Therefore in the sentencing process both these factors are taken together.<sup>22</sup>

In a criminal trial, the learned Judge has to consider the different theories of punishment while awarding the most appropriate punishment keeping in mind the various theories of punishment, he has to choose the exact punishment which is called for in the particular facts and circumstances of each case. At the time of imposing punishment, the learned Judge should consider two important factors which would shape the most appropriate punishment – (a) aggravating factors and (b) mitigating factors. Aggravating factors are those factors which go against the offender and mitigating factors are those factors which go in favour of the offender. Some of the examples of aggravating factors are – brutality in the commission of offence, excessive cruelty, dangerous manner of commission of the offence to the individual or to the society at large, use of dangerous weapons, multiple murders, murder of innocent helpless woman or child etc. Similarly some of the examples of mitigating factors are – age, character, antecedents, poverty, transgression the limit of self defence, family background, circumstances which impel the offended to commit crime.

22 Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs. (March 2003). Report, at 169. Retrieved September 23, 2019 from [http://mha.nic.in/hindi/sites/upload\\_files/mhahindi/files/pdf/criminal\\_justice\\_system.pdf](http://mha.nic.in/hindi/sites/upload_files/mhahindi/files/pdf/criminal_justice_system.pdf)

So the above aggravating factors and mitigating factors have to be seriously assessed and properly balanced for fixing the appropriate punishment. These factors are generally considered by the learned Judge at the time of imposing punishment as these are the very important and vital variables. The punishment will be severe if the aggravating factors of a case are more and the punishment will be less or smaller when the mitigating factors of the case are less.

### **SOME JUDICIAL OBSERVATION ON PUNISHMENT**

In modern days of criminal justice system urgently need for sentencing policy in India. In India neither the legislature nor the judiciary has made sentencing guidelines. Several governmental committees have pointed to the need to adopt such guidelines in order to minimize uncertainty in awarding sentences. The higher courts, recognizing the absence of such guidelines, have provided judicial guidance in the form of principles and factors that courts must take into account while exercising discretion in sentencing.

In *Gurubachan Sing v. Satpal Singh*<sup>23</sup>, the Apex Court cautioned saying that exaggerated devotion to rule of the benefit of the doubt must not nurture fanciful doubts or lingering suspicion as they destroy social defence. Justice cannot be made sterile on the plea that it is better to let hundred guilty escapes than punish an innocent. Letting guilty escape is not doing justice according to law.

The Supreme Court in *Modi Ram & Lala v. State of Madhya Pradesh*,<sup>24</sup> held that keeping in view the broad object of punishment of criminals by courts in all progressive civilised societies true dictates of justice seem to us to demand that all the attending relevant circumstances should be taken into account for determining the proper and just sentence. The sentence should bring home to the guilty party the consciousness that the offence committed by him was against his own interest as also against the interests of the society of which

he happens to be a member. In considering the adequacy of the sentence which should neither be too severe nor too lenient the court has, therefore, to keep in mind the motive and magnitude of the offence, the circumstances in which it was committed and the age and character (including his antecedents) and station in life of the offender.

The Supreme Court in *Jagmohan Singh v. State of U. P.*,<sup>25</sup> held that It is necessary to emphasize that the court is principally concerned with facts and circumstances, whether aggravating or mitigating, which are connected with the particular crime under inquiry. It was further held that the court should pass the sentence by balancing aggravating and mitigating factors of each case.

In *Alister Anthony Pareira v. State of Maharashtra*,<sup>26</sup> the Supreme Court held that sentencing is an important task in the matters of crime. One of the prime objectives of the criminal law is imposition of an appropriate, adequate, just and proportionate sentence commensurate with the nature and gravity of the crime and the manner in which the crime is done. There is no straitjacket formula for sentencing an accused on proof of crime. The courts have evolved certain principles: the twin objective of the sentencing policy is deterrence and correction. What sentence would meet the ends of justice depends on the facts and circumstances of each case and the court must keep in mind the gravity of the crime, motive for the crime, nature of the offence and all other attendant circumstances.

The Supreme Court in *State of Punjab v. Prem Sagar & Ors.*,<sup>27</sup> held that in our judicial system, we have not been able to develop legal principles as regards sentencing. The superior courts except for making observations with regard to the purport and object for which punishment is imposed upon an offender, had not issued any guidelines. The Court stated that the superior courts have

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23 AIR 1990 SC 209

24 AIR 1972 SC 2438 : 1972 Cri.L.J 1521 : (1972) 2 SCC 630

25 AIR 1973 SC 947

26 (2012) 2 SCC 648, at para. 69

27 (2008) 7 SCC 550, at para. 2

come across a large number of cases that “show anomalies as regards the policy of sentencing, adding, whereas the quantum of punishment for commission of a similar type of offence varies from minimum to maximum, even where the same sentence is imposed, the principles applied are found to be different. Similar discrepancies have been noticed in regard to imposition of fines. In 2013 the Supreme Court, in the case of *Soman v. State of Kerala*,<sup>28</sup> also observed that giving punishment to the wrongdoer is at the heart of the criminal justice delivery, but in our country, it is the weakest part of the administration of criminal justice. There are no legislative or judicially laid down guidelines to assist the trial court in meting out the just punishment to the accused facing trial before it after he is held guilty of the charges.

However, in *M.H. Hoskot v. State of Maharashtra*,<sup>29</sup> Supreme Court cautioned the judiciary against showing more leniency to offenders based on reformatory theory that would amount to injustice to the society. The offences like serious economic offences and other offences, the balance has to be maintained between the security of society and rights of offenders.

In *Ankush Maruti Shinde & Ors. v. State of Maharashtra*,<sup>30</sup> the Apex Court held that, protection of society and stamping out criminal proclivity must be the object of law which must be achieved by imposing an appropriate sentence. Therefore, law as a cornerstone of the edifice of “order” should meet the challenges confronting the society. Friedman in his “Law in Changing Society” stated that, “State of criminal law continues to be as it should be a decisive reflection of social consciousness of society”. Therefore, in operating the sentencing system, law should adopt the corrective machinery or the deterrence based on factual matrix. By deft modulation sentencing process be stern where it should be, and tempered with mercy where it

warrants to be. The facts and given circumstances in each case, the nature of the crime, the manner in which it was planned and committed, the motive for commission of the crime, the conduct of the accused, the nature of weapons used and all other attending circumstances are relevant facts which would enter into the area of consideration. For instance a murder committed due to deep seated mutual and personal rivalry may not call for penalty of death. But an organised crime or mass murders of innocent people would call for imposition of death sentence as deterrence.

### SUGGESTIONS

The Indian Penal Code prescribes offences and punishments for the same. For many offences only the maximum punishment is prescribed and for some offences the minimum may be prescribed. The Judge has wide discretion in awarding the sentence within the statutory limits. There is now no guidance to the Judge in regard to selecting the most appropriate sentence given the circumstances of the case. Therefore each Judge exercises discretion according to his own judgment. There is therefore no uniformity. Some Judges are lenient and some Judges are harsh. Exercise of unguided discretion is not good even if it is the Judge that exercises the discretion. In some countries guidance regarding sentencing option is given in the penal code and sentencing guideline laws. There is a need for such law in our country to minimize uncertainty to the matter of awarding sentence. There are several factors which are relevant to prescribing the alternative sentences. This requires a thorough examination by an expert statutory body.<sup>31</sup>

The Law Commission in its 47<sup>th</sup> report says that a proper sentence is a composite of many factors, the nature of offence, the circumstances extenuating or aggravating the offence, the prior criminal record if any of the offender, the age of the offender, the professional, social record of

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28 (2013) 11 SCC 382

29 AIR 1978 SC 1548

30 AIR 2009 SC 2609

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31 Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs. (March 2003). Report, at 170. Retrieved September 24, 2019 from [http://mha.nic.in/hindi/sites/upload\\_files/mhahindi/files/pdf/criminal\\_justice\\_system.pdf](http://mha.nic.in/hindi/sites/upload_files/mhahindi/files/pdf/criminal_justice_system.pdf)

the offender, the background of the offender with reference to education, home life, the mental condition of the offender, the prospective rehabilitation of the offender, the possibility of treatment or training of the offender, the sentence by serving as a deterrent in the community for recurrence of the particular offence.<sup>32</sup>

Different kinds of punishments are the need of the hour. Disqualification from holding public office, removal from the community etc. are some of the measures that should be introduced and not punishment in a prison. These punishments are not custodial in nature. In other words instead of conventional punishments enumerated in Sec.53 of the Penal Code which was enacted in 1860 nothing has been done to reform the system of punishment. Considering the new nature, modus operandi and types of crimes in the modernization and globalization of this era, it is suggested that a Committee should be appointed to review the Indian Penal Code and other allied criminal laws deal with punishment and to suggest creation of new kinds of offences, prescribing new forms of punishments and reviewing the existing offences and punishments. The Indian Penal Code was enacted in the year 1860, the Evidence Act was enacted in the year 1872 and the Code of Criminal Procedure which was enacted in the year 1898 was replaced by the new Code in the year 1973. These laws enacted long back are now found to be inadequate to meet the new challenges. People are losing faith and are rightly demanding stronger laws and greater functional efficiency of the System. Hence there is a need of review all these laws.

Therefore in order to bring about certain regulation and predictability in the matter of sentencing, the Committee recommends a statutory committee to lay guidelines on sentencing guidelines under the Chairmanship of a former Judge of Supreme Court or a former Chief Justice of a High Court experienced in criminal law with other members

representing the prosecution, legal profession, police, social scientist and women representative.<sup>33</sup>

Section 53 of the IPC enumerates various kinds of punishments that can be awarded to the offenders, the highest being the death penalty and the second being the sentence of imprisonment for life. At present there is no sentence that can be awarded higher than imprisonment for life and lower than death penalty. In USA a higher punishment called "Imprisonment for life without commutation or remission" is one of the punishments. As death penalty is harsh and irreversible the Supreme Court has held that death penalty should be awarded only in the rarest of rare cases, the Committee considers that it is desirable to prescribe a punishment higher than that of imprisonment for life and lower than death penalty. Section 53 be suitably amended to include "Imprisonment for life without commutation or remission" as one of the punishments. Wherever imprisonment for life is one of the penalties prescribed under the IPC, the following alternative punishment be added namely "Imprisonment for life without commutation or remission". Wherever punishment of imprisonment for life without commutation or remission is awarded, the State Governments cannot commute or remit the sentence. Therefore, suitable amendment may be made to make it clear that the State Governments cannot exercise power of remission or commutation when sentence of "Imprisonment for life without remission or commutation" is awarded. This however cannot affect the Power of Pardon etc of the President and the Governor under Articles 72 and 161 respectively.<sup>34</sup>

So far as sentences of fine are concerned, time has come to have a fresh look on the amounts of fine mentioned in the IPC and the mode of recovery. As the law stands we have two classes of offences for which only fine can be imposed. Then there are

32 Law Commission of India, 47th Report on The Trial and Punishment of Social and Economic offences, Retrieved September 20, 2019 from <http://lawcommissionofindia.nic.in/1-50/Report47.pdf>

33 Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs. (March 2003). Report, at 171. Retrieved September 22, 2019 from [http://mha.nic.in/hindi/sites/upload\\_files/mhahindi/files/pdf/criminal\\_justice\\_system.pdf](http://mha.nic.in/hindi/sites/upload_files/mhahindi/files/pdf/criminal_justice_system.pdf)

34 Ibid. Pp. 175-176



offences for which fine can be imposed in addition to imprisonment. Further for non-payment of fine, imprisonment is also provided. So far as imprisonment in case of default of payment of fine is concerned it is time that the same was done away with. In view of the acceptance that custodial sentences are only to be imposed in grave crimes there are many areas where correctional approach or community sentences etc., will have the desired effect. Section 64 of the IPC should be amended and Sec. 65 which says that where in addition to imprisonment, fine is imposed as also punishment in default of the payment of fine imprisonment shall not exceed 1/4th of the sentence that may be fixed should also be deleted. Sec. 66, 67 should also be deleted as also 68 and 69 of the IPC and in all these crimes community services for specified periods should be prescribed.<sup>35</sup>

The need to reclassify crime today is both urgent and compelling. Offences range from the most heinous crime such as murders to a minor offence of appearing in a public place in drunken state. The result is that individuals once they are convicted for a minor offence get labelled as criminals and this stigma makes it difficult for them to get jobs and even a chance to reform and become useful members of Society. When such persons are sent to jail, they often come under the influence of hardened criminals and gravitate towards a life of crime. This is one of the reasons for suggesting fine

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35 Ibid. Pp. 176-177

and not imprisonment as the only punishment in respect of large number of minor offences. This logic equally applies to increasing the number of compoundable offences which while satisfying the victim do not affect societal interests.<sup>36</sup>

## CONCLUSION

In Criminal Justice System, severe punishment demands higher standard of proof of guilt. The need for punishment is one of the most important issues. The infliction of punishment should be properly balanced considering the gravity of the offence. Punishment should be moderate enough to be human but cannot be too moderate to be ineffective. Obviously, conviction rate would be less, which is not a healthy sign of Criminal Justice System. Certainty of punishment much depends upon the simplicity of laws and good method of procedure. Criminal justice must balance between "Justice delayed is justice denied" and "Justice hurried is justice buried" which are two important basic concepts of criminal justice. No theory of punishment is against the punishing the guilty but the theorists differ on the purpose of punishment. Accordingly there is an urgent need for guidelines of sentencing policy in India considering the modern theory of punishment as stated above.

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36 Ibid. Pp. 184-185

# Windows Registry Forensic Analysis

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The Indian Police Journal  
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## ABSTRACT

To solve any cybercrime, it is essential for an investigating officer to understand the working of digital device. Evidence collection from the digital evidence is strenuous and time consuming task because of high capacity storage media/hard disks. Another reason is that digital devices are very fragile and can be tempered or damaged easily. Therefore for an effective and efficient examination investigating officer should be able to identify, collect and preserve the digital evidence. To do forensic analysis of the digital devices, forensic investigator may start with windows registry in order to find evidence about hardware and software used on that particular computer. In cyber forensic, windows registry is a vital source of information for collecting the digital evidence. Malicious programmes also use the various computer resources in the background or while running, so these may leave some footprints in the windows registry. This article explains windows registry, structure of windows registry and tools and techniques that can be used to access the registry. It covers the initial forensic analysis of the registry to collect the information about mounted devices including USB storage media, wired and wi-fi network card details and list of registered applications. Consequently, the forensic analysis process and collection of digital evidence may take less time.

**Keywords- Windows Registry Analysis, Forensic investigation, Cyber Attack, Cyber Forensic, Windows Registry Forensic**

## Introduction

The Windows Registry is a collection of thousands of records containing a variety of information, such as the time zone, user settings, user accounts, external storage devices, and opened applications, recently accessed files and much more. REGEDIT, the Windows Registry Editor is a graphical tool in the Windows operating system to view and modify the Windows registry. You can open this by pressing the Windows key+R and typing "regedit".

This article covers the following:

1. What is Windows Registry
2. Basic structure of the registry

3. How to access Windows Registry
4. USB Storage Devices Traces
5. Mounted Devices related Traces
6. Network Card Details -
  - a. Wired Network Card Details
  - b. Wireless Network Card Details
7. Registered Applications

**NOTE-** If you are an inexperienced user, don't change the registry entries of your system/computer. Using the Windows Registry Editor incorrectly or altering the values, can cause serious problems for your computer requiring the re-installation of windows operating system and possible loss of data.

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## Author's Intro:

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## 1. Windows Registry

The **Windows Registry** is a hierarchical database (the data is structured in a tree format) that stores hardware, software and computer components related information for the Microsoft **windows** operating system and for programmes that opt to use the *registry*. The kernel, device drivers, services, security accounts manager, and user interface etc. use the *registry*. - *Wikipedia*

Whatever event takes place in Windows operating system is recorded in the Windows Registry. It contains the information that Windows continually references during operation, such as each user's profile, user preferences, the applications installed on the computer, property settings of the folders/directories and application icons, existing hardware on the computer, and the ports that are being used by various hardware and software applications. Sometimes installed applications don't use the registry to store their configurations and settings such as portable applications usually store their configuration related information within

the folder from these apps run. Sometimes applications use XML or text files to store the configuration related information. The registry can be viewed and modified using regedit, a graphical tool already available in windows operating system.

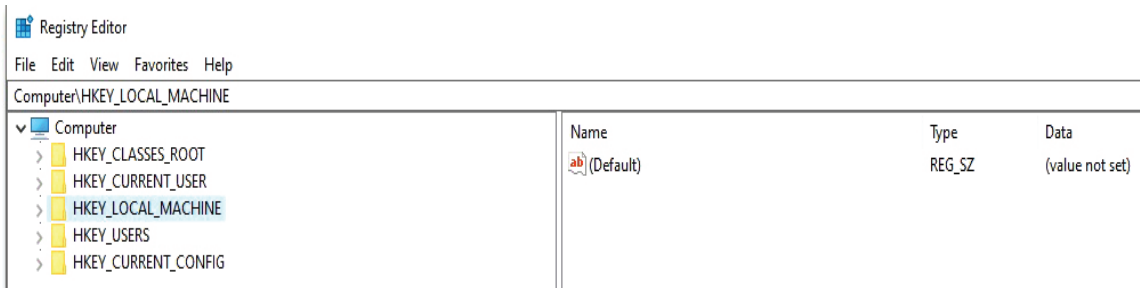
Windows Registry is like DNA for the Windows operating system.

## 2. Basic Structure of the Windows Registry

Major section of Windows Registry is called as Hive/subtree that contains registry keys, subkeys and registry values. These hives contain information of hardware, software, computer configuration and user preferences etc.

Here is a list of the common registry hives in Windows Operating System:

- HKEY\_CLASSES\_ROOT
- HKEY\_CURRENT\_USER
- HKEY\_LOCAL\_MACHINE
- HKEY\_USERS
- HKEY\_CURRENT\_CONFIG



**Figure1- Windows Registry Root Keys**

Example

HKEY\_CURRENT\_USER\Control Panel\Desktop\Colors\Menu

- **Registry Hive:** HKEY\_CURRENT\_USER
- **Registry Key:** Control Panel
- **Registry Subkey:** Desktop
- **Registry Subkey:** Colors
- **Registry Value:** Menu

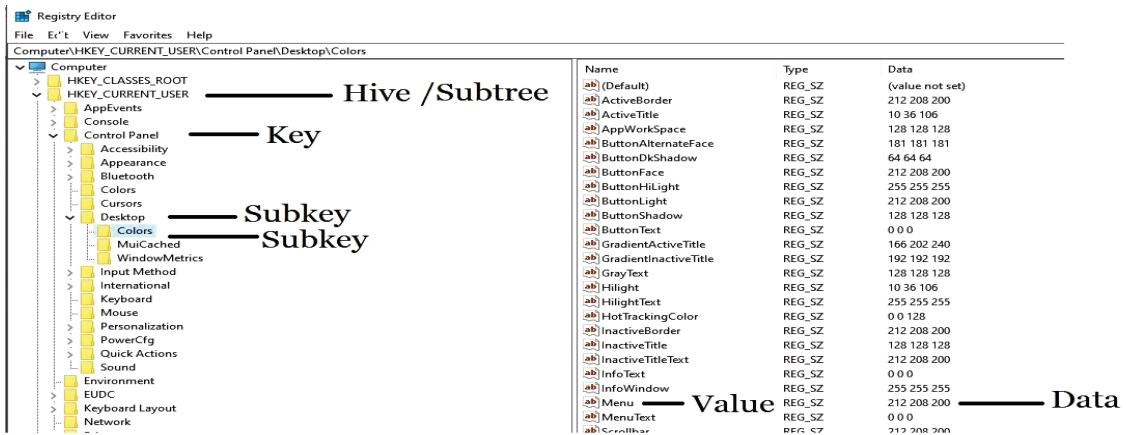


Figure 2 - Registry Structure

A *Registry hive* is a collection of keys, sub keys, and values in the windows registry that contains a set of supporting files loaded into memory when the operating system is started or a user logs in. Each time a new user logs on to a computer, a new entry is created for that particular user with a separate file. This is called as *user profile*. A user’s hive holds specific registry information related to the user’s computer, network connections, printers and application settings.

Registry hives, cannot be created, deleted, or renamed but registry keys and values can be altered or deleted. There are 5 hives that make up the Windows registry. The following list contains each sub-tree, the standard abbreviation, and the type of information contained within each sub tree:

S.No.	Hive/Subtree	Abbreviation	Description
01.	HKEY_CLASSES_ROOT	HKCR	Contains information about file extension associations and the Object Linking and Embedding (OLE) database. . Because of this, Windows can recognize a .doc file as a Microsoft Word document.
02.	HKEY_CURRENT_USER	HKCU	Contains user information, preferences, and settings for the currently logged on user. Each time a user logs on, the user’s profile is copied from the HKEY_USERS key to the HKEY_CURRENT_USER key.
03.	HKEY_LOCAL_MACHINE	HKLM	Contains computer-specific information, such as hardware, SAM, security, software and system.
04.	HKEY_USERS	HKU	Contains user information i.e. currently logged in user, user’s default profile, and system accounts related information.
05.	HKEY_CURRENT_CONFIG	HKCC	Created during the booting process of computer and contains hardware configuration related information that is currently in use and allows for backwards compatibility with older applications and device drivers.

\*HKEY - Handle to Registry Key

**Registry Key-** The data is structured in a tree format. Each node/folder in the tree is called as **key**. Each key can contain both *subkeys/subfolders* and data entries called as **values**.

Sometimes, the presence of a key is all the data, that an application requires; and sometimes, an application opens a key and uses the values associated with that key.

Let us understand a bit more about **HKEY\_LOCAL\_MACHINE** because it contains settings that apply to the local computer's configuration and affect each user that logs on.

HKEY\_LOCAL\_MACHINE key holds hardware and software related information under the mentioned five subkeys:

1. Hardware
2. Security accounts manager (SAM)
3. Security
4. Software
5. System

**Hardware subkey-** These stores settings for device drivers etc. It is re-created each time the computer boots.

**Security Accounts Manager(SAM) subkey-** It stores information of security settings, user accounts, and group memberships. The Security subkey holds information on local security policies e.g. password policy, user rights, account lockout etc.

**Security Subkey-**It contains all the security information utilized by the operating system including password policies.

**Software Subkey-** It is applicable to all local users, stores data about installed software.

**System Subkey-** It stores information needed to boot windows operating system.

Following list displays the name of each hive and

the filename associated with that particular hive:

Registry hive	Supporting files
HKEY_LOCAL_MACHINE\SAM	Sam, Sam.log, Sam.sav
HKEY_LOCAL_MACHINE\Security	Security, Security.log, Security.sav
HKEY_LOCAL_MACHINE\Software	Software, Software.log, Software.sav
HKEY_LOCAL_MACHINE\System	System, System.alt, System.log, System.sav
HKEY_CURRENT_CONFIG	System, System.alt, System.log, System.sav, Ntuser.dat, Ntuser.dat.log
HKEY_USERS\DEFAULT	Default, Default.log, Default.sav

The supporting files for all hives except HKEY\_CURRENT\_USER are in the

%System Root%\System32\Config folder

And

%System Root%\Profiles\Username folder.

These files are updated each time a user logs on.

**Note:** Backups of the hives are located in C:\Windows\system32\config\regback. Now look at the modified dates of those files to determine if they contain some relevant information useful to your investigation. Using REGEDIT, to look at HARDWARE key. The key is volatile in memory, so you will not be able to see it during registry analysis. It contains hardware devices related information hardware devices that were detected during the boot process of computer.

The file name extensions of the files in these folders are self-explanatory and indicate the type of data that they contain. Also, the lack of an extension also indicates the type of data that they may contain.

Extension	Description
none	A complete copy of the hive data.
.alt	A backup copy of the critical HKEY_LOCAL_MACHINE\System hive. Only the System key has an .alt file.
.log	A transaction log of changes to the keys and value entries in the hive.
.sav	A backup copy of a hive.

### 3. How to access Windows Registry:

Registry can be accessed by following any one of the steps –

Open the command prompt & type in “regedit”(without quotes) & press enter.

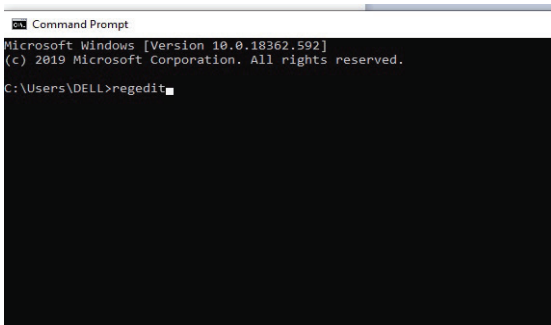


Figure 3 - Open Regedit using Command Prompt

2. Click on the start button & then on the search bar to type in “regedit” (without quotes) Then press enter.(in windows 7, 10)

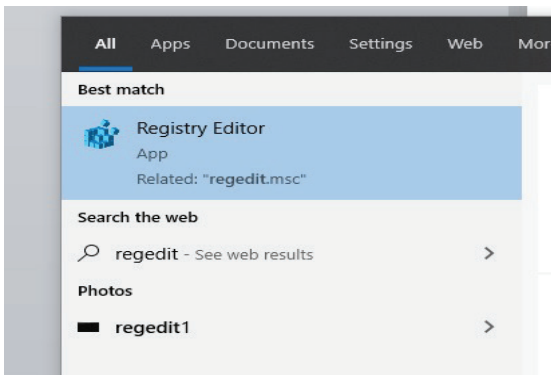


Figure 4 - Open Regedit using Search Bar

3. Click on start button -> Press winkey +R ->Type in regedit

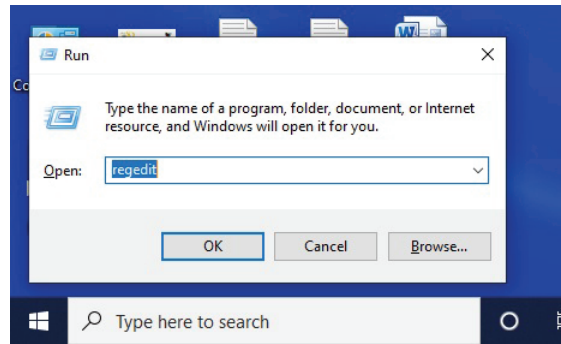


Figure 5 - Open Regedit using run command

### 4.USB Storage Devices Traces

USB Devices Information locations where investigating officer needs to look to find information

HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Enum\USBSTOR

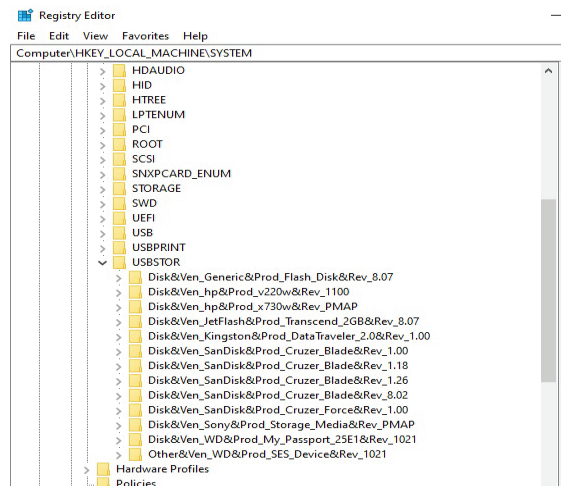
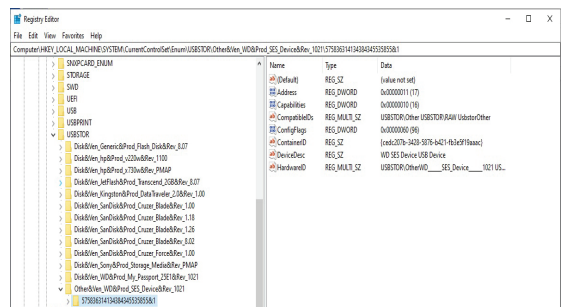


Figure 6 –USB Devices Location

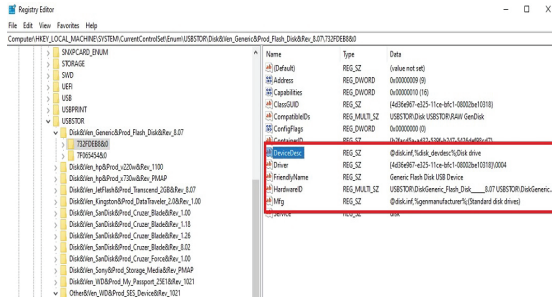
### Details of Specific USB Device-



# Windows Registry Forensic Analysis

Figure 7 –Specific USB Device Details  
USB Device Details

Figure 8 –USB Device ID, Manufacturer, Description



## 5. Mounted Devices Details -

Details of Mounted Devices on the computer can be accessed using the following key

HKLM\SYSTEM\Mounted Devices

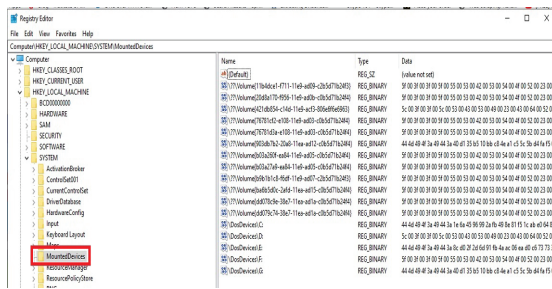


Figure 9- Mounted Devices Details

## 6.NetworkCard Details -

The Registry keeps a list of all network cards connected to that particular device whether the network card is built in or is an external network card. In portable devices such as laptops there are two type of network card: the Ethernet network card and Wi-Fi network card. The following Registry key provides the list of network card:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\NetworkCards

### a.Wired/Intranet Network Card Details

Intranet/Ethernet network that the system has been connected to is stored within the Registry at the following location:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\NetworkCards\2

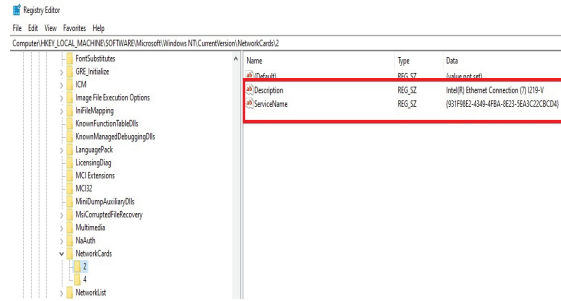


Figure 10- Ethernet Network Card Details

### b. Wireless Network Card Details

For any wireless networks that the system was connected to, the identifiers are stored in the following key:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\NetworkCards\4

This key displays a list of identifiers for each of the wireless networks that the system has been connected to.

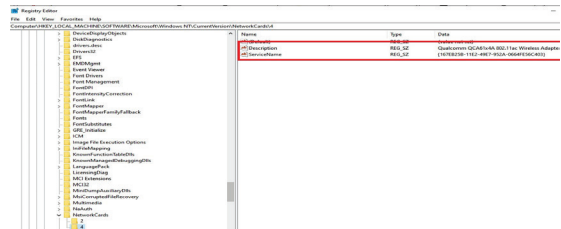


Figure 11- Wireless Network Card Details

**7.Registered Applications** - The list of registered application is showed in Figure and listed in the following Register key:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Registered Applications

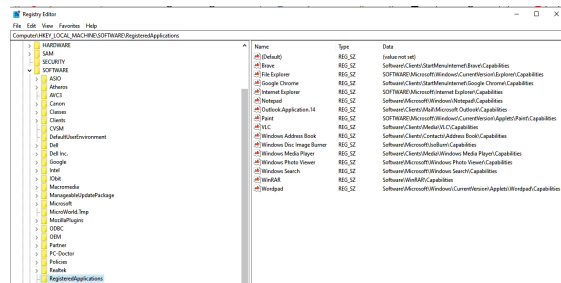


Figure 12- Registered Applications on the Computer

### Registry Editor Functionality

Complications might occur if a novice edits or modifies the windows registry by using Registry Edit (reg edit) or by using any other technique or tool. Even computer system might require the re-installation of the operating system therefore inexperienced users should not modify the registry.

You can use Registry Editor to do the following:

- Locate a subtree, key, subkey, or value
- Add a subkey or a value
- Change a value
- Delete a subkey or a value
- Rename a subkey or a value

The Registry Editor displays the directories and each directory/folder represents a pre-defined key on that particular local computer. When you access the registry of a computer, located at remote location, only two predefined keys appear:

- HKEY\_USERS
- HKEY\_LOCAL\_MACHINE

### Useful Tips while analyzing windows registry

Categorizes the type of items you are looking for, for example-

- If you are looking for user's profile such as when the user logged in last etc. This task can be accomplished using SAM directory.
- System configuration related information such as time zone or network related information can be accessed by using SYSTEM or SOFTWARE.
- User activities foot prints can be collected by accessing NTUSER.DAT file.
- USB devices analysis can be done by accessing SYSTEM and SOFTWARE directories

- Access Data Registry Viewer and Harlan Carvey's RegRipper - Windows registry forensics tool for extracting and parsing the information such as keys, values, data out of the windows Registry. Reg Ripper is an open source tool, written in Perl and available for both the operating systems i.e. Windows and Linux. Reg Ripper was developed by Harlan Carvey and it is considered as one of the fastest, easiest, and best tools for windows registry forensics analysis.

### CONCLUSION

In this article, we have understood that windows registry analysis can provide the important evidence that may be crucial for investigation purpose. We read the following:

1. What is Windows Registry
2. Basic structure of the registry
3. How to access Windows Registry
4. Locations where investigating officer needs to look to find information

And now we can find the following information from the Windows Registry using REGEDIT tool-

- a) Connected USB devices traces
- b) Mounted Devices
- c) Ethernet Card Details
- d) Wireless Card details
- e) Registered Applications under Software

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Practical Windows Forensic -Ayman Shaaban, Konstantin Saprnov



# Bawaria Crimes in Tamilnadu- How We Put an End to It



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

**S. R. Jangid IPS\***

A series of cases, very sensational in nature but committed with the same modus operandi (MO) had puzzled the Tamilnadu State police for over one decade (1995-2015). Following an MO had been adopted while perpetrating these dastardly acts -

- I. Dacoity in houses located along the National Highways from Gummidipoondi - Chennai - Bangalore.
- II. Unprovoked violence while committing the crime resulting in killing or causing grievous injuries to the inmates including elderly persons and children.
- III. Use of firearms and steel rods.
- IV. Looting of jewels and cash and at times electronic goods like cellphones.
- V. Attacking the public, if anyone gathers outside hearing the screams of the inmates

## 2. SENSATIONAL CASES

2.1. Every offence committed by them became very sensational mainly due to the cruelty with which they operated. On the night of 07.06.95, they struck terror in the house of Dr M. Mohan Kumar at Walajapet in Vellore district killing him on the spot and seriously injuring his wife and two children. This followed looting of gold jewels and cash valued more than Rs.50,000/- and decamped with the same. The case was referred

as undetectable in the year 1998. We reopened the case in the year 2005, arrested the accused, got their fingerprints tallied and two of the accused were convicted to death sentence by the Fast Track Court, Ranipet. They again struck terror in the same town the following year on 23.02.96 by committing dacoity in the house of one Sankar. After a gap of about 4 years, they re-entered Tamil Nadu only in the year 2001 when they perpetrated dacoity in Avinashi followed by three more dacoities in the same year in the districts of Dharmapuri and Salem at intervals of 1 to 3 months. The frequency of their commissions increased in the year 2002 with 8 dacoities committed in Tamil Nadu at Avinashi, Kangeyam, Gummidipoondi, Athur, Karimangalam, Burgur, Sriperumbudur and the most sensational of which was the one committed in Salem City dealt with in Anthanpatti in Cr.No. 575/02 in which on the night of 12.09.02, these desperado gained entry into the house of Thiru Thalamuthu Natarajan, killed him and his watchman Gopal and injured all the 6 inmates, some of them seriously. Strangely, the commission of the dacoity was informed to the police who reached the spot and one SI saw the culprits coolly walking away but there was no appropriate reaction by the police as the culprits were armed with firearms. They walked for about 2 kms and boarded the lorry parked there and drove to their destination. Apart from the jewels and cash they looted one pistol and one DBBL gun belonging to the deceased.

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### Author's Intro:

\* Director General of Police (Rtd)

2.2. In the year 2003, they perpetrated dacoities in four occasions in Tamil Nadu at Sholavaram, Walajapet and Natrampalli. Of the 4, 3 were dacoities with murder. Subsequently in the year of 2004 also, they operated four times in Tamil Nadu at Thiruverkadu, Vellavedu, Sriperumbudur and Tiruvalam and the most sensational was Thiruverkadu PS Cr.No. 132/04 in which the dreaded criminals killed the house owner Thiru Gajendran by shooting him dead and also killed the watchman and injured 2 other inmates in the outskirts of Chennai City.

2.3. The year 2005 dawned with the atrocities of these desperado and even before we could celebrate the Pongal, they struck terror in the house of the former Minister and the sitting MLA Thiru Sudarsanam at his house near Periyapalayam. They attacked the inmates causing grievous injuries, looted properties and when Thiru Sudarsanam attempted to resist, he was shot dead at point-blank range. The gang leader, who positioned himself outside the house guarding the scene, fired at the neighbours who gathered outside the house hearing the screams and chased them away. They made a cool departure by boarding their lorries parked one kilometre away from the crime scene. On their way back they attempted another dacoity next night, on 10.01.05 at Burgur.

2.4. In these 10 years, they committed 24 dacoities in Tamil Nadu where in 13 persons were killed, 63 were injured, majority of them seriously and properties, mostly jewels and cash valued over Rs. 2 crores were looted.

### 3. FORMATION OF THE SPECIAL TEAMS

Following the incident that took place on 09.01.05 at Periyapalayam and in order to dispel fear among the people living along the National highways, it was felt imperative to prevent recurrence of such dacoities and track down the culprits. With that in mind, the State Government formed a special party headed by me, as I was Inspector General of Police, North Zone. It is to be noted that all the decade long dacoities by these gangs were

committed along the National highways falling under the North and West Zones. I selected 4 young DSsP, 10 Inspectors, 10 SIs and 30 other ranks at the outset and left for different directions after initial discussion and briefing. I also took 4 fingerprint experts with me. The initial clues which included use of .315 bore country made revolver, fingerprints (which never tallied with any criminals on record in the state), typical shoes and use of broken Hindi language in some places indicated the involvement of criminals outside Tamil Nadu. Hence, our search started from Stuart Puram bordering Tamil Nadu. One team was sent to Karnataka, another team to Andhra Pradesh and I took the remaining teams to Delhi. The first two teams, after getting no clues, were asked to visit Maharashtra and Madhya Pradesh respectively.

### 4. SUSPECTED GANGS/TRIBES

It started with virtually a wild goose chase. All the teams were instructed to discuss with the police officers of the areas concerned who were experts at handling the criminal gangs the special terms have cast suspicion and various tribal groups. With these discussions, we formed initial ideas about involvement of any one of the following criminal gangs who may belong to any tribes –

1. Pardies (base at Central India)
2. Bawarias (base at North India)
3. Shekh Bangalas (base at Punjab and Haryana and Bihar)
4. Sansis (Central and North India)
5. Kanjars (Central India) and the special teams have cast suspicious on
6. Saperas (Central India).

After elaborate discussions and analysis of modus operandi of all these gangs, the special teams have cast suspicion on the first two tribal gangs. Both are equally violent and adopt almost the same modus operandi. The only difference was that the Pardies gangs always commit rapes while committing such dacoities whereas Bawarias do not commit rapes. Due to this difference only we could zero in on the Bawarias as no rape had

been committed in any of the incidents in Tamil Nadu.

## 5. THE CAMPS

5.1. I called back all the teams and reassembled them in the Bawarias dominated states of Haryana, Rajasthan, Uttar Pradesh and Punjab. Teams led by one DSP was positioned in each State. DSP Tr. Jayakumar of Thirukoilur and his teams were positioned at Bharatpur in Rajasthan. DSP Tr. Vijayakumar of Thiruvallur and his team were positioned at Palwal in Faridabad district in Hariyana (Palwal has since been formed as a district). DSP Tr. Arul Arasu of Hosur and his teams were placed in Agra to move in Uttar Pradesh and Dr. Sudhakar, DSP Madhavaram took care of Punjab with his teams. I had to personally move between these places mainly because of the language problem as only two-three policemen had little knowledge of Hindi. But the native informants were not even comfortable in Hindi. Hence I had to introduce the informants to our teams. Yet another problem was to have a liaison with the local police. I contacted all senior officers particularly my batchmates working in these four states and got directions to local officers to render necessary assistance to Tamil Nadu Police. Another biggest problem was that we went equipped with the fingerprints taken from the SOCs but these North Indian States had no such recording of fingerprints of criminals at that time. Punjab has recently started a systematic documentation of fingerprints but that was still in a primitive stage. As a result, our fingerprint records were of no avail. After considerable discussion with lower level officers in Ambala and Agra, we were informed the practice of taking the thumb impression of criminals in the Central Jails whenever they were imprisoned. Hence, we placed our fingerprint teams along with these DSPs at the Central Prisons of Agra, Ambala and Jaipur and commenced a comparison with all the Bawaria gangs arrested and remanded since 1995. In fact, officials of Prisons of these states were surprised the way we were comparing the fingerprints with their prisoners entry-registers.

5.2. On 01.02.05 we found no bounds of joy when

our Fingerprint Expert Tr. Dhanajezhian from Agra informed that the chance prints were found tallied with that of one accused Ashok @ Lakshman Bawaria of Chandanpura village of Rajasthan recorded at the Central Jail, Agra in 1996. We rushed to Bharatpur. The SP Sri Rajiv Sharma IPS, presently ADGP, was so kind to have agreed to have a meeting at his residence at the midnight with our officers despite cold weather. He deputed one DSP, two Inspectors and some policemen to assist us in securing the said Ashok @ Laksmanan Bawaria. Next morning we reached Roopwas Police Station in which jurisdiction Chandanpura village lay. It is only with the help of the Bharatpur Police that we could reach the Chandanpura village and traced informants in the surrounding areas. The first to be secured was Dharam Singh Bawaria, the organiser of the gang who would himself not visit the place of occurrences but defend and guide the gang. On 26.02.05 we were able to nab the said Ashok @ Lakshman Bawaria. He was sent to Tamil Nadu with our escorts. On the confession of the said Dharam Singh and Ashok @ Lakshman Bawaria all the mysteries of the occurrences were unraveled. Hence, the task ahead was to secure the remaining but known gang members. Similar assistance was rendered to us by SP Dholpur, Sri Hemant Priyadarshi IPS, presently ADGP. In the midst of the ongoing elections to local bodies he spared services of police officers and men but for that it would have been difficult to comb the suspected hide outs of the culprits in Dholpur district.

5.3. It was also transpired on his interrogation that they used to travel by lorries from North India and go to far off places in the south with goods booked by reputed companies. They used to commit dacoities *en route*. That is how the National Highways suited them. They also kept secret chambers in their lorries in which they used to conceal the weapons and the looted jewels and other properties. We recovered 4 such lorries used by these gangs from various places at Seccondrabad, Pune, Ludhiana and Faridabad. The seizure of the lorries was one of the connecting evidence as their registration numbers were noted at the transport offices and check posts before

and after the incidents. One of the lorries seized at Jalandhar was found with tampered registration numbers. We were also able to seize cell phones which were looted from the SOCs in Tamil Nadu and used by these gangs and some of the phones were sold to others in Uttar Pradesh and Punjab. We used the IMEI numbers technique to trace them. This was clinching connecting evidence which strengthened the prosecution case.

5.4. The seizure of various documents containing contacts and cell numbers of the associates of the said Ashok @ Lakshman Bawaria from his house provided a lead in getting further into the details of the gang members. We wasted no time to get all the calls and other details of these cell phones. We could find the details of the calls made from the places nearby SOCs on the fateful days and the time of the occurrences in Tamil Nadu. This helped us in connecting the culprits with the crimes perpetrated by them.

5.5. With this, we changed the locations of our teams and positioned them at places likely to be frequented by these gang members as they do not stay in a fixed abode. We stationed our teams with the U.P. STF and sought their assistance. The U.P. STF had done excellent work between 2001-2003 after frequent dacoities by Bawaria gangs in Uttar Pradesh and finally killing the MLA of Saharanpur in one of such incidents. The U.P. STF, headed by its founder SP Sri Arun Kumar IPS, presently working as DGP RPF, killed more than two dozens of Bawaria criminals in encounters during these 2 years and several gangs were eliminated. But unfortunately the Oma gang, which perpetrated dacoities in Tamil Nadu remained away from the clutches of the laws because of their intelligent operation and secret hide-outs, despite the fact that they were also involved in several dacoities in Uttar Pradesh. The fear of encounters by the Uttar Pradesh police forced them to leave Uttar Pradesh and switch their major operations to Central and South India and that is how Tamil Nadu got badly affected. We are also indebted to the UP STF, I would it as the most professional police unit in the country and its then Chief, SP Sri Akhil Kumar and his team for many sensational detections and

arrests in this case.

5.6. Every arrest was splendid work of our team because each one followed meticulous planning, liaising with other state police and hard team work. For example, securing Oma Bawaria was a dream for the police force of Uttar Pradesh, Haryana, Rajasthan, Punjab and Delhi. Apart from several cases against him he had even fired at Police of Faridabad and escaped when they tried to nab him. Jagadesh Bawaria had a bounty on his head announced in Madhya Pradesh State. He was also wanted in several cases of Rajasthan State. Securing of Oma Bawaria, the gang leader at Kannauj (Uttar Pradesh) on 08.09.05 by a special party led by me and also securing of Jagadish Bawaria at Pune on 14.08.05 by another party led by me were the examples of supremacy of Tamil Nadu police. Both the state police forces worked with us shoulder-to-shoulder making the arrests a grand success. Similar was the arrest of Gudu Bawaria near Palwal in Haryana on 30.03.05 whose fingerprints tallied with several cases including that of SOC of killing of MLA Thiru Sudarsanam near Periyapalayam. His confession helped us to get further details of the gangs. Almost each arrest followed litigation by their family members but we were able to defend each of our action in High Courts and the Supreme Court.

5.7. Meanwhile, we were able to follow them and secure the culprits one after another and in all, 13 gang members were caught and incarcerated in the jails of Tamil Nadu.

5.8. On 01.03.06 I was in Ghaziabad having a discussion with Uttar Pradesh STF about the whereabouts of two left out criminals i.e. Bhura and Jitendra who had participated in almost every offence in Tamil Nadu. We got information about their movement near Meerut and accordingly we took help of Meerut Police. On the night of 01.03.06 both the wanted criminals were killed in an encounter on the outskirts of Meerut.

5.9. Arrest of these criminals solved, mysteries behind many heinous crimes committed throughout the country. For example, their fingerprints tallied with the following cases of

Andra Pradesh –

S.NO	Police Station	Crime No.	Sec. of Law
1.	Thangatoor	67/01	395 IPC
2.	Suryapet	142/04	396, 397 IPC
3.	Yadumari	77/03	396, 392 IPC 25 Arms Act

Similarly, their fingerprints tallied with four similar crimes committed in Karnataka state.

### 6. THE FINAL END – THE JUDGEMENT

6.1. Subsequently, we concentrated on the prosecution of the crimes. Investigation teams were formed under the leadership of Thiru Madhavan, DSP, DCRB, Kancheepuram who concentrated on completing the investigations meticulously and compiling the police reports (charge sheets). 3 cases were tried and disposed. They are Walajapet PS Crime Nos. 403/1995, 59/1996 and 305/2003 which ended in conviction in the Court of Fast Track, Ranipet on 21.04.2006 and 24.06.2006 in which the **Hon’ble Judge had awarded death sentence to the gang leader Oma Bawaria and Ashok @ Lakshman Bawaria.** They were also awarded life sentence under remaining sections of law. All the associates were convicted to life imprisonment. Similarly, other two cases were also convicted to life imprisonment. I am very proud to quote some extracts of the judgement which run as follows:

**“The court also recognizes the achievements of the special team formed under the leadership of IG Tr. S.R. Jangid, IPS in having detected these crimes wherein the culprits were eluding and the cases remained clueless for over 11 years.”**

**“The physical efforts made to identify the culprits and the details furnished by A1 Oma @ Omprkash when questioned u/s 313 CrPC that his brother Bhura A3 was killed in an encounter led this court to commend IG Tr. Jangid and his party. The court is also of view that the Tamil Nadu Police, which was considered on par with the world famous Scotland yard has made similar achievement in this case and decides to commend them highly.”**

6.2. This is how we were not only able to put an end to the heinous crimes that had rocked the state for the past one decade but also brought the culprits to book mainly due to the dedication and hard work of our special police parties.

### 7. THE RECENT MOVIES

7.1 Recently a Tamil movie titled *“Theeran Adhigaram Ondru”* released on 17.11.2017 has hit the silver screen in which a young director Mr. Vinoth has meticulously picturized the above crackdown. The film was made and released in Telugu also titled *“Khakee”* on the same day. Both the movies seem to be riveting and huge box office hit. It has also been dubbed in Hindi and already telecasted under name *Dheeran*.

# Victim-Offender Relationship and Post-Traumatic Stress Disorder in Incarcerated Murderers



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

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## ABSTRACT:

In western literature, the oldest description of symptoms of PTSD is seen in Homer's Iliad written around 720 BC. Post-traumatic stress disorder (PTSD) is a common reaction to traumatic events, especially in heinous crimes. Many offenders and victims of crimes recover in ensuing months, but insignificant offenders and victims, the symptoms persist, often for years. This research work was conducted on 374 convicted murderers. Out of these, 31 offenders with PTSD symptoms were selected for the study. This study aims to explore the victim-offender relationship with post-traumatic stress disorder in offenders. The data was collected from Central Prison, Sagar through the random sampling method. Traumatic events were assessed by using the Psychological Scale and Interview Schedule. The findings indicate that more than half of the offenders were convicted for the murder of their family members. The study suggests that the offenders need psychological treatment to come out of the mental trauma.

**Keywords:** Murder, Offender, Traumatic event, PTSD.

## INTRODUCTION:

Crime is anti-social behavior and is directed against certain fundamental values (Mannheim, 1946). In the criminal justice system, researchers and social scientists have long been interested in murder and murderer. As Wolfgang indicates, "More professional literature has appeared on homicide than on any other specific criminal offense, perhaps because murder has traditionally been viewed in most cultures as the most serious form of violation of collective life" (Waldo, 1970). Most sociological studies believe that murder is an outcome of the differential distribution of individual or social characteristics, and while such studies explain the

transformation in aggregate homicide rates, they do not explain the social system of murder, that is, who kills whom, when, where, and for what cause (Papachristos, 2009). It is only recently that serious attention has begun to be paid to explain crimes rather than the criminality of people involved in crime. The concern with the place is very central to this concept (Clarke, 1980). Criminological studies of violent and assaultive behavior have been conducted in many disciplines, ranging from biology to sociology, and have employed many different approaches (Wolfgang, 1967). The Indian Penal Code conceives of homicide as the killing of a human being by a human being.

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## Author's Intro:

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Etymologically 'Homicide' comes from Latin word, 'Homa'(Meaning 'Man') and 'Cide'(Meaning 'Cut'): Homicide may be 'lawful' or it may be unlawful. (Devasia, 1989). Victims, criminals ,and a crime against the victim by the criminal have been linked from the beginning through studies. The relationship between the victim and the offender is an important variable in studies of personal violence because it places the event within the context of social structures. Roles such as husband, wife, friend, lover, and stranger are complex social relationships that may delineate homicides that share a distinctive etiology. Furthermore, the moral and legal responses to violence are, to a large extent, determined by the social roles of the victim and offender (Loftin et al., 1987). A traumatic event is an event that is or may be a cause of trauma. The term may refer to Psychological trauma, it is a type of damage to the mind that occurs as a result of a severely distressing event. Trauma is often the result of an overwhelming amount of stress that <sup>exceeds</sup> one's ability to cope or integrate the emotions involved with that experience. A traumatic event involves one's experience or repeating events of being overwhelmed that can be precipitated in weeks, years, or even decades as the person struggles to cope with the immediate circumstances, eventually leading to serious, long-term negative consequences ("Trauma Definition", 2014). Homicide perpetrators have been observed to report symptoms of Post-Traumatic Stress Disorder (PTSD) directly related to involvement in the offence itself (Pollock, 2010).

#### **POST-TRAUMATIC STRESS DISORDER (PTSD):**

Post-Traumatic Stress Disorder (PTSD) is a common reaction to traumatic events such as assault, disaster, or severe accidents. The symptoms include repeated and unwanted re-experiencing of the event, hyper arousal, emotional numbing, and avoidance of stimuli (including thoughts) which could serve as reminders for the event. Many people experience at least some of these symptoms in the immediate aftermath of the traumatic event (Ehlers, 1999). Traumatic event" has been defined in different ways over the last few decades. One approach has been to define it in terms of the type of event. Norris

(1990) describes traumatic events as those life events involving violent encounters with nature, technology, or social environment. These events are characterized by extreme and/or sudden force involves an external agent, and can arouse intense fear(Hoffmann, 2002). These symptoms usually occur within a few weeks of trauma, but they may not appear for several months or even years. Extreme anxiety and trauma-related fear are characteristic of PTSD. The American Psychiatric Association classifies PTSD in a category with other trauma- and stress-related disorders that are closely related to anxiety disorders. Some people may experience PTSD simultaneously with anxiety disorders, depression, and substance abuse. Women are twice as likely to develop PTSD as men("Posttraumatic Stress Disorder", n.d.).

#### **POST-TRAUMATIC STRESS DISORDER TREATMENT:**

##### **Psychotherapy:**

Some types of psychotherapy used in PTSD treatment include-**Cognitive therapy**, This type of talk therapy helps you recognize the ways of thinking (cognitive patterns) that are keeping you stuck. **Exposure therapy**, This behavioral therapy helps you safely face both situations and memories that you find frightening so that you can learn to cope with them effectively..

##### **Medications:**

Several types of medications can help improve symptoms of PTSD for example-**Antidepressants**, These medications can help symptoms of depression and anxiety. **Anti-anxiety medications**, These drugs can relieve severe anxiety and related problems. **Prazosin**, While several studies indicated that prazosin (Minipress) may reduce or suppress nightmares in some people with PTSD ("Post-traumatic stress disorder", n.d.).

#### **VICTIM OFFENDER RELATIONSHIP:**

The relationship between the victim and the offender is very intricate. The victim, one who suffers, and the offender, one who harms the victim, appear in victimization in a close interpersonal relationship. All offenders against

the person involve direct contact between victim and offender, but murder usually means a greater degree of intensity or longer duration of the contact than is true for any other offence (Wolfgang, 1958). Parker (1989) suggested that family homicide would be more closely related to socioeconomic factors, whereas acquaintance homicides would be influenced by subculture factors. Stranger homicide would be affected by both economic and sub cultural factors, depending on the circumstances. Several studies on the sentencing of homicide offenders have been published, but only a few studies examined the victim-offender relationship as the main variable (Dawson, 2004, 2012). The newly developed interest in the victim-victimizer relationship shows that the understanding of crime is reaching a new phase (Devasia, 1980).

**Review of the literature:** There have been many studies in the context of the murder, murderer, and PTSD, some of which are the following:

Freeman (1996), research showed that involvement in offence and involvement with the criminal justice system have reached exceptional levels among young men. With around 2% as many men mounded as in the labor power, the crime rate should have plummeted. The costs of incarceration are such that even marginally effective prevention policies can be socially desirable. Kovandzic et al. (1998) study explored the relationship between rates of homicide and income inequality and poverty. This research reports the findings of a city-level analysis of this relationship, using 1990 data for the 190 largest cities in the United States. Kubrin (2003), the study assessed whether socioeconomic and demographic characteristics are correlated with different types of homicide. The findings of this research indicate that while residential instability is associated only with felony killings, economic disadvantage is associated with all of the homicide categories. Williams & Flewelling (1988), had done research on comparative studies of homicide in the United States research showed that indicators of resource deprivation and social disintegration tend to have significant effects across subtypes of homicide, although the magnitude of the effects varies, while indicators of violent cultural

orientation are confined to homicides resulting from interpersonal conflicts. Waldo (1970), compared 621 incarcerated murderers with a group of incarcerated non-murderers in terms of previous incarcerations and adjustment on previous sentences served. It was determined that murderers were less likely than non-murderers to have been previously incarcerated and this difference was maintained when controlled for race, age, and intelligence. For those who had been previously incarcerated, adjustment on previous sentences was analyzed and it was found that murderers were less likely to have had escapes or infractions than non-murderers. He et al. (2003), examined the utility of the stream analogy of lethal violence. Based on frustration/aggression thesis and attribution thesis, expanded integrated models of total lethal violence and the suicide-homicide ratio are proposed. The data also reveals that the divorce rate greatly increases the total amount of violence but does not influence the percentage of lethal violence that is expressed as suicide over homicide. Miles-Doan (1998), used Duval County, Florida, law enforcement data for 1992 and data from the 1990 census, this study explores whether neighborhood context is as important in explaining census-tract-level variation in the incidence of violence between spouses and intimate partners as it is in explaining violence between others who know each other. This study finds that neighborhoods with great resource deprivation also have dramatically higher rates of violence between intimates. Ehlers & Clark (1999), research showed that Posttraumatic stress disorder (PTSD) is a common reaction to traumatic events. Many people recover in the ensuing months, but in a significant subgroup, the symptoms persist, often for years. A cognitive model of the persistence of PTSD is proposed. The model is consistent with the main clinical features of PTSD, helps explain several apparently puzzling phenomena, and provides a framework for treatment by identifying three key targets for change. Hoffmann (2002), research showed that the few epidemiological studies of traumatic events amongst tertiary students have been conducted in South Africa. The incidence of 10 traumatic event categories has been measured by means of the Traumatic Stress Schedule in



a convenience sample (N = 245). It was found that more than two thirds (70,6%) of the sample reported one or more traumatic events during the preceding year, with the most frequent traumatic event categories being the death of a loved one, a negative change in life circumstances and witness to injury/death. Norris's (1990), study presented a short instrument for detecting the occurrence and impact of traumatic events as well as information about perceived losses, threats, and rates of posttraumatic stress disorder (PTSD) associated with each event. Pollock's (2010), research showed that the Homicide perpetrators have been observed to report symptoms of post-traumatic stress disorder (PTSD) directly related to involvement in the offence itself. The nature of difficulties these offenders experience is considered and the need for appropriate psychological intervention in such cases is discussed.

#### Objectives:

1. To know about the relation of offenders those who are having Post Traumatic Stress Disorder and their victims of crime.

2. To determine the symptoms of PTSD in the offenders.

#### METHODOLOGY:

This study was conducted on 374 male convicted murderers at central prison, Sagar, Madhya Pradesh in the year 2017. The primary data was collected through a random sampling method with the help of the interview schedule and psychological scale. Only 31 convicted offenders were selected for this study, those were having PTSD syndrome. In this work, Personal information was taken from the offenders related to the age of offenders at the time of the crime, victim's age, type of residence, marital status, educational qualifications, family type, occupation, PTSD symptom, relation with the victim. Data has been analysed through the SPSS program and shown through the Table, diagrams, and the chi-square test.

#### RESULT AND DISCUSSION:

In this study total 31 convicted offenders were selected for data analysis and data analysis has been represented through tables as follows:

Table 1: Distribution of offenders by selected background characteristics

S. No.	Selected Background Characteristics	Frequency	Distribution in %
1.	Residence Type: Rural	21	67.7
	Urban	10	32.3
	Total=	31	100.0
2.	Marital status: Unmarried	8	25.8
	Married	12	38.7
	Widower	11	35.5
	Total=	31	100.0
3.	Educational Status: Illiterate	4	12.9
	Primary	1	3.2
	Middle School	14	45.2
	High School	5	16.1
	High Secondary School	2	6.5
	Graduate	3	9.7
	Postgraduate	2	6.5
Total=	31	100.0	
4.	Family Type: Nuclear	15	48.4
	Joint	16	51.6
	Total=	31	100.0
5.	PTSD Symptom: Yes	31	8.3
	No	343	91.7
	Total=	374	100.0

The personal background shows in Table 1, that 67.7% of the offenders were residing in the rural area whereas 32.3% were in the urban area. Only 1/4<sup>th</sup> of the offenders were unmarried and others were found married and widows. In educational qualifications, only 12.9% of offenders

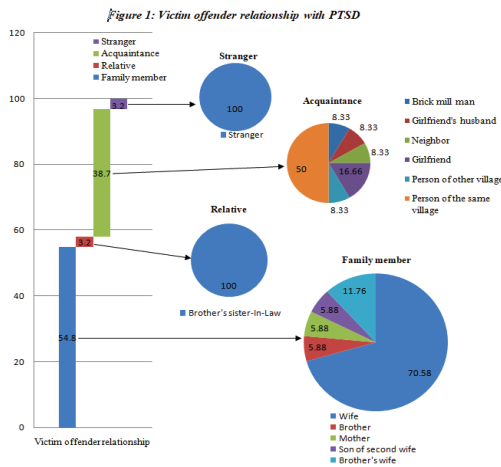
were illiterate and 9.7% were graduate and postgraduate (6.5%). Almost half of the offenders were living in a nuclear family system and the rest of the others were in the joint family system. Out of 374 offenders, 8.3% of offenders were having the symptoms of PTSD.

**Table 2: PTSD Symptoms in the offenders**

PTSD Symptoms	% Distribution					
	Not at all	Once per week or less / a little	2 to 3 times per week / somewhat	4 to 5 times per week / a lot	6 or more times a week / severe	Total
<b>Re-experiencing symptom:</b>						
Unwanted distressing memories about the trauma	3.2	29.0	41.9	3.2	22.6	<b>100.0</b>
<b>Avoidance:</b>						
Making efforts to avoid activities, situations, or places that remind you of the trauma	12.9	38.7	38.7	3.2	6.5	<b>100.0</b>
<b>Changes in cognition and mood:</b>						
Intense negative feelings such as fear, horror, anger, guilt or shame	58.1	32.3	3.2	0.0	6.5	<b>100.0</b>
Difficulty experiencing positive feelings	12.9	38.7	35.5	3.2	9.7	<b>100.0</b>
<b>Increased arousal and Reactivity:</b>						
Difficulty concentrating	9.7	35.5	48.4	0.0	6.5	<b>100.0</b>
Difficulty falling or staying asleep	29.0	45.2	16.1	0.0	9.7	<b>100.0</b>
<b>Distress and interference:</b>						
Difficulties been bothering	12.9	12.9	58.1	6.5	9.7	<b>100.0</b>
Difficulties been interfering with your everyday life	3.2	16.1	67.7	6.5	6.5	<b>100.0</b>
<b>Symptom onset and duration:</b>						
How long after the trauma did these difficulties begin	32.3	9.7	35.5	16.1	6.5	<b>100.0</b>
How long have you had these trauma-related difficulties	38.7	3.2	29.0	16.1	12.9	<b>100.0</b>

Table 2 shows that the highest no. of offenders was having distress and interference as difficulties been bothering 58.1% (2 to 3 times per week) and also the same period, difficulties been interfering with them everyday life 67.7%. In increased arousal and reactivity, the highest no. of respondents (48.4%) were found in difficulty in concentrating 2 to 3 times per week, and 45.2% of respondents in difficulty falling or staying asleep once in a week. In re-experiencing symptoms, Unwanted distressing memories about the trauma 41.9% respondents 2 to 3 times per week and also in the same category 22% respondents feel 6 to more times per week.

**Figure 1: Victim offender relationship**



In figure 1, the relationship between the criminal and the victim has been divided into four categories. The first category consists of family members with 54.8% in which the percentage of the wife is 70.58%, brother is 5.88%, the mother is 5.88%, son of the second wife is 5.88% and that of brother's wife is 11.76%. The second category consists of relatives with 3.2% of which brother's sister-in-law is with 100%. The third category consists of the victims who were known to the criminal in one way or the other. This category includes 38.7% people of which the percentage of brick mill man is 8.33%, girlfriend's husband is 8.33%, other neighbors are 8.33%, paramour is 16.66%, the person of other village is 8.33% and

the percentage of the person of the same village is 50%. The fourth category consists of the victims who were strangers to the criminal. This category consists of 3.2% of people.

After the analysis of the above figure, it was found that most of the victims belong to the first category, in which maximum no. is of the criminal's wife. After this comes the percentage of the third category, in which the maximum no. of the victim were people living in the same village. This research shows that the symptoms of Post-Traumatic Stress Disorder have mostly been found in the criminals who have murdered any of their own family members.

Table 3, Showing statistical distribution of data obtained by cross tabulation of victim offender relationship with post traumatic stress disorder

**Table 3: Victim offender relationship \*PTSD Symptom Cross-tabulation**

Yes	PTSD Symptom		Chi-Square Sig.
	Value	df	
Victim offender relationship	17		3.000
	1	30.822	
	12		
	1		
Total	31		

The above table 3, shows that victim-offender relationship and PTSD is significantly related to each other. As it is the significance with .000 Level.

**Figure 2: Age of the victim and offender at the time of murder (in Years)**

Figure 2, denotes the age of those 31 offenders in whom the symptoms of Post Traumatic Stress Disorder have been found and the age of the victim at the time of the murder. In the above-mentioned data the ages of the offenders and victims have been divided into age group. In this 61.3% offenders belong to the age group of 18-29 years, 32.3% belong to the age of 30-39 years and 6.5% offenders belong to the age of 40-49 years. On the other hand, if we see the statistical figures

of the victims, we find that 3.2% victims belong to the age less than 18 years, 64.5% belong to 18-29 years 12.9% belong to 30-39 years, 12.9% belong to 40-49 years and 6.5% belong to the age group of 50-59 years. After analyzing the data, it has been found that the percentage of offenders and the victims in the age group of 18-29 years is mostly the same. In other words, we can say that most cases of murders happen or take place in this age group and the offender and victim are almost the same age. This research also indicates that the symptoms of Post Traumatic Stress Disorder occur quickly in this age group.

*Figure 3: Imprisonment Duration (in Years)*

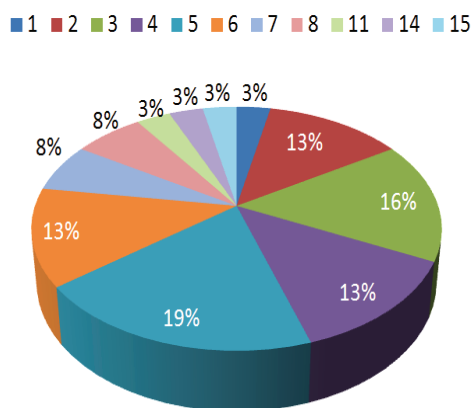


Figure 3, denotes the time-period of the imprisonment of the 31 offenders who are suffering from Post Traumatic Stress Disorder. The time period is shown from the time of the murder to the date of the interview. The above-mentioned pie-chart shows that 19% offenders are those who have completed 5 years from the day and date of the murder, 16% have completed 3 years, 13% have completed 6 years, another 13% have completed 4 years, yet another 13% have completed 2 years, 8% have completed 8 years, another 8% have completed 7 years, 3% have completed 15 years, another 3% have completed 14 years, and a 3<sup>rd</sup> 3% have completed 11 years and last 3% have completed 1 year of imprisonment. After analyzing the data it has been found that those 3% offenders who have completed 1 year of imprisonment are suffering from Post Traumatic

Stress Disorder and on the other hand that 3% who have been imprisoned for the last 15 years are also suffering from the same PTSD. This proves that Post Traumatic Stress Disorder symptoms can be seen for a long time. This psychological problem for a longer period of time can affect the average life span of a person. Therefore such persons need psychological therapy in the right manner so that they can also live a normal life.

**CONCLUSION:**

In many earlier studies, it has been seen that most incidents of murder happen at a young age. The present research also shows that the highest numbers of offenders are the age group of 18-29. "Homicide may be due to sudden provocation on the part of the victim and/or uncontrollable impulsive behavior does not force everybody to commit criminal homicide. Every murderer, therefore, gradually and consciously or unconsciously accepts homicide as an absolute solution for problems he faces (Devasia & Devasia, 1992)". The bad effects of the murder are seen in a victim as PTSD symptoms. This research is basically centralized on the criminals who have received punishment on account of the murder. The result describes the data of the criminals who are suffering from the symptoms of Post Traumatic Stress Disorder. Post Traumatic Stress Disorder is a psychological disease, whose symptoms can be seen in any person after any incident or accident. These symptoms can be seen mostly in people who themselves or any of their family members have met with any such incident."The victims of many assaults and homicides have what may be called an aggressive-tyrannical personality and engage in acts with the offender which invite or excite assaultive response ( Mendelsohn,1963)". "The victim is usually emotionally involved with the offender- a spouse, parent, or lover (Schultz,1960)". Earlier the studies related to Post Traumatic Stress Disorder have been done only on the victims who have suffered, but the symptoms of this can be seen in any person who has suffered any kind of anti-social incident. Data analysis shows that members of the victim's family are

more likely to have symptoms than the criminal's wife and other family members. Research shows that in the same way as the victim has Post-traumatic Stress Disorder (PTSD) symptoms after the incident, there is also a PTSD symptom in the offenders after the incident. This study also reveals that PTSD symptoms were found in the offenders who were incarcerated from one year to fifteen years in prison. It means PTSD can be found for a long period after the crime. Looking at this problem the study suggests that the prisoners of this age group need treatment for PTSD and counseling from psychological experts to come out of mental trauma. For this, Indian prisons need psychological counseling to adjust the prisoners in society. "A special psychological counseling session was organized at Lucknow jail where inmates suffering from depression were apprised of ways to deal with mood disorders that negativity impact one's life (Lucknow jail inmates, 2019)".

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# The Importance and Essentiality of Counselling for Police Officers - A Systematic Review



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## ABSTRACT

This study aimed to review previous articles that related to coping strategies utilized by police officers when encountering their job stress. In this paper, it is argued that the counselling could provide rich insights into the understanding of employee and employer relations within the police and the stress and wellbeing of officers. Police officers often experienced stress when executing their job. Stress and trauma experienced by police officers in the line of duty can have negative impacts on officers' health and wellbeing. Psychological support and counselling is imperative to help officers maintain psychological well-being and to perform their duties more efficiently.

The author concluded that police departments should consider making periodic counselling mandatory for all officers, a procedural tactic that camouflages counselling need while concurrently treating the source of officer stress. The suggestions for future study research of importance and essentiality of counselling in policing were also discussed.

**Keywords**-Police officers.Counselling.Stress . Wellbeing,Psychological support, police health promotion.

## INTRODUCTION

What is Policing?

It is widely acknowledged the world over that policing is one of the most stressful professions. Police officers were reported to possess a high level of job stress as compared to other professionals (Russell, 2014; Yun et. al., 2013). Over the past decade, policing has been widely discussed as a stressful occupation as compared to other professions in the literature (Campbell and Nobel 2009; Vuorensyrja and MalkiaVuorensyrjä and Mälkiä2011). By its nature, it has been identified as one of the most demanding and

stressful occupations worldwide because of the officers' exposure to a variety of acute and chronic stressful events at work (Lieberman et al. 2002; Magnavita and Garbarino2013; Paton et al. 2009). Consequently, police officers are at greater risk of physical and mental ill-health, e.g. impaired psychosocial wellbeing and physical ill-health (Garbarino, Cuomo, Chiorri, and Magnavita Garbarino et al. 2013; Lucas, Weidner, and Janisse Lucas et al. 2012), self-harm and poor functioning (Volanti et al. 2016).

## STRESS AND POLICE

Stress plays a part in the lives of everyone. Some

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### Author's Intro:

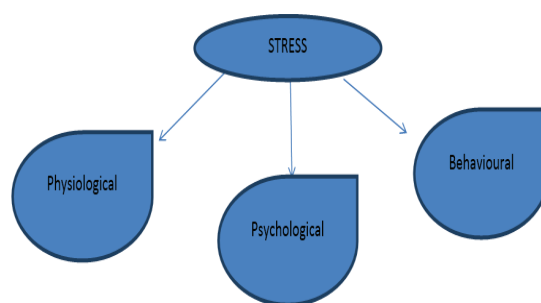
\* Ph.D. (Allied Health Sciences, Psychology)

stress may be called eustress which is not only inevitable, it can be good. For example, the physical stress of “working out” improves your cardiovascular system, and feeling pressure that causes you to study harder for an exam can improve your score. Police stress, however, refers to the negative pressures or Distress related to police work. According to Gail Goolkasian and others, research shows that they are affected by their daily exposure to human indecency and pain; that dealing with a suspicious and sometimes hostile public takes its toll on them; and that the shift changes, the long periods of boredom, and the ever-present danger that are part of police work do cause serious job stress. Police officers experience frequent and on-going stressors in their work. These stressors range from cumulative stress (constant risk on the job, the need for adherence to often restricting and conflicting regulations, public perceptions that may be inaccurate) to critical incidents such as violent crimes, shootings and mass disasters. While these stressors are inherent and accepted by officers, they need not necessarily lead to burnout or other psychological problems including substance abuse, marital problems, anxiety, depression or post-traumatic stress disorder. Many studies have shown that the job of policing is an extremely stressful one (Colwell, 1988; Heiman, 1975; Kroes, Margolis & Hurrell, 1974; Niederhoffer & Niederhoffer, 1978; Selye, 1978; Somodevilla, 1978 & Violanti, 1992).

Police stress arises from several features of police work. Alterations in body rhythms from monthly shift rotation, for example, reduce productivity. The change from a day to a swing, or graveyard, shift not only requires biological adjustment but also complicates officers’ personal lives. Role conflicts between the job—serving the public, enforcing the law, and upholding ethical standards—and personal responsibilities as spouse, parent, and friend act as stressors.

Stress contributes not only to the physical disorders previously mentioned, but also to

emotional problems. Some research suggests that police officers commit suicide at a higher rate than other groups. Most investigators report unusually high rates of divorce among police. These stress experiences impair their health and result in high rates of mental illness. Stress related illnesses are of particular concern and are reflected in tragically high suicide rates, divorce, alcoholism, decreased job satisfaction and burnout (Curran, Finlay & McGarry, 1988; Labovitz & Hagedorn, 1988).



### POSSIBLE SOURCES OF PSYCHOLOGICAL STRESS

- **Within the organization characteristics:** lack of supervision, lack of positive reward, restrictive policies, excessive paperwork, poor equipment.
- **Criminal Justice practices:** unfavourable court decisions, recidivism, court delays and continuances, adversarial nature of the justice system.
- **Public practices:** distorted press accounts of police work, allegations of brutality and racism, adverse local government decisions such as funding.
- **Police work itself:** role conflict (e.g. apprehension of criminals while needing to maintain their rights), irregular work schedule, danger inherent in the profession, inability to resolve and close many problems in the community, witnessing human suffering, seriousness of the consequences of one’s actions, critical incidents such as shootings or



mass disasters, cumulative nature of stress.

## CHALLENGES

Police work is challenging in multiple ways. Police officers are often mandated to respond to and resolve violent situations (e.g., violent criminals, terrorist attacks, and domestic violence). It can be inferred that police officers, as frontline professionals, adopt a dual role: that of the “crime fighter” and that of the “social service worker” (Manzella&Papazoglou, 2014). Previous research has clearly demonstrated the link between line of duty stress and deleterious effects on health outcomes through officer self-report and physiological stress. Research has indicated that by the time police officers put on their uniform and begin general patrol, their stress-related cardiovascular reactivity is already elevated (Anderson, Litzenberger, & Plecas, 2002).

Police officers are expected to perform well and make the right decisions under extreme stress. Police organizations, the government, and the public in general, expect police officers not only to be healthy, but also to maintain high performance levels in the line of duty. However, police officers are human beings and they have their own personal and family lives to consider. At the end of their shift, they return home and undertake the role of the parent, spouse, sibling, friend, and so on. When individuals manage multiple roles they may experience role strain, or the difficulty in meeting given role demands due to allocation of energy, skills, and resources into multiple roles (Goode, 1960). The policies and procedures of the police organization (Swanson & Territo, 1983) and autocratic management (Cooper, Davidson, & Robinson, 1982) have been known to cause discontent and dissatisfaction among police personnel along with frequent transfer, suspension / suppression, delayed promotions, non-grant of leave on time and departmental inquires (Mathur, 1995). The success of a law enforcement organisation depends upon a good understanding of the stressors operating within the organisation and managing their impact on

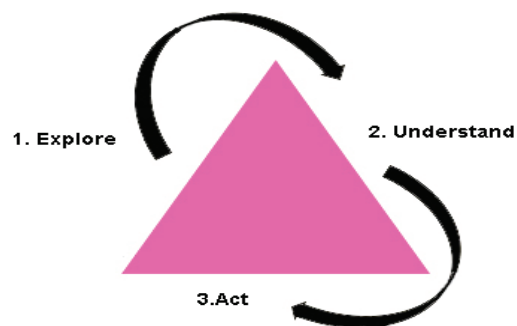
performance and wellbeing (Kuo2014). Generally, there are two accepted sources of stress in policing namely job content (operational stressors) and job context (organisational stressors) (Houdmont et al. 2012; McCreary and Thompson 2006; Shane 2010). Operational stressors for policing, such as exposure to violence and death, pressure to perform efficiently, making critical decisions and life-threatening situations (McCraty and Atkinson 2012; Violanti and Aron1993; Waters and Ussery2007), have been linked to psychosomatic symptoms and psychological distress (Burke and Mikkelsen2005; Dowler and Arai 2008; Setti and Argentero2013; Volanti et al. Violanti et al. 2006). In addition, organisational stressors, such as shift work, overtime demands, feelings of being always on the job, problems with co-workers, inadequate training, weekend duty, poor relationships with supervisors and colleagues and a lack of administrative support (Ellison 2004; McCreary et al. McCreary and Thompson 2006; Shane 2010; Violanti et al. Violanti and Aron1993), have been associated with depression and anxiety (Nelson and Smith 2016), suicide (Spence and Millott Spence and Millot2016), burnout (Burke and Mikkelsen2005), marital or family problems (Alexander and Walker 1996), poor performance (LeBlanc, Regher, Jelley, and Barath LeBlanc et al. 2008), emotional exhaustion, cynicism, absenteeism, early retirement, alcoholism and post-traumatic stress disorder (Brough2004; Dowler et al. Dowler and Arai 2008; Martinussen, Richardsen, and Burke Martinussen et al. 2007; Setti et al. Setti and Argentero2013; Toch2002; Volanti et al. Violanti et al. 2006).

## COUNSELLING - THE FINEST COPING STRATEGY

According to the American Counseling Association “Counseling is a professional relationship that empowers diverse individuals, families and groups to accomplish mental health, wellness, education and career goals.” Our world is increasingly becoming more interconnected. This globalization highlights the need for highly trained mental health professionals to address trauma, addiction, depression, academic and

career concerns in clinics, hospitals, schools, and universities. Counselling takes place when a counsellor sees a client in a private and confidential setting to explore a difficulty the client is having, distress they may be experiencing or perhaps their dissatisfaction with life, or loss of a sense of direction and purpose.

Inability to cope with job stress sufficiently would lead to emotional disturbances, mental disorders, unhealthy body and social isolation. Coping strategies is derived from cognitive, biological and social development. Coping strategies according to Sipon et al., (2014), functions as survival skills in encountering various challenges in life as well. In brief explanation, coping strategies is significant element in life functioning and individual development (Grant et al., 2003). Coping is viewed as stabilizing factor that may help individuals maintain psychological adaptation during stress period (Lazarus & Folkman, 1984; Moose & Billings, 1982). Very recently, Freedy and Hobfall (1994), pointed out that the persistence of stress and burnout across the time suggests the need for effective intervention programmes (see also Wade, Cooley & Sivicki, 1986). Examples of ways of coping in policing are cognitive coping, behavioral coping and external source of coping such as social support. Coping strategies refers to different strategies utilized when encountering particular stressful conditions. According to Masten (2006), coping strategies requires wider context by taking into account the context of physiology, emotion, external behavior, attention, interpersonal and social environment. According to HolodyskidanFriedlmeier (2006), coping strategies are a social interaction and physical context in real life situations. Therefore, social and physical sections should be considered when discussing coping strategies. There are endeavors to reduce, eliminate or modify stress among police personnel using psychological techniques based on the western model.



## METHODOLOGY

The library search was carried out on library databases and several journals such as Policing: An International Journal of Police Strategy and Management, Stress Medicine, Psychological Bulletin by using the key words “police” and “stress” and “coping”. Accordingly, the search was restricted to coping with stress as general. The articles findings filtered articles accordingly; the search included a variety of settings in policing. In term of the design, chapters of the book, theses, students’ review article and empirical studies were included in this review. All studies published in English were selected in this review. The previous articles covered year from 1988 to 2019, resulted in 250 journal articles, but only 100 research articles were selected since they fulfilled the criteria required related to importance and essentiality of counselling as a coping strategy.

Profession of ‘counselling’ (therapy, psychotherapy and psychology) for specific situations where there is a formal counselling contract (Bond, 1989; McLeod, 2003; Wango, 2015). This is also important in the p

## BENEFITS OF COUNSELLING

A lot of research is discussed regarding the issue of coping strategies in policing while encountering job stress. Many people have a significant degree of emotional distress, which may include anxiety, depression, anger or burnout. Work stress in particular has adverse effects on the person and organisation, including poor health, absence from work and attendant costs to the organisation

(Cooper, Sloan, & William, 1988; Wainwright & Calnan, 2002). Work stress has a wide range of pressures experienced by workers that include work overload, lack of control over tasks, poor working environment, difficulties in relationships with colleagues and managers and in turn family, differences in career development and career achievement, and the dilemmas in balancing between the home-work interface (Carroll, 1996; Cooper, Sloan & William, 1988; Wainwright & Calnan, 2002). Policing is a highly specialized type of work unlike many other professions. Although it is not specifically easy to measure and conceptualise problem coping (Heppner, 2008), police work in particular can be very stressful (Moad, 2011) for various reasons, including the fact that police officers have irregular and long working schedules. Besides, frontline police officers often tackle traumatising incidents in their day-to-day activities. In the developing world, there is the additional stress associated with poor working conditions long periods of separation from immediate family members due to far-flung postings, and the exigencies of duties (Moad, 2011; Wango, 2015). Police officers with stress-related symptoms and depression require help, and in good time. Counselling psychology, through an interdisciplinary approach, can provide a range of problem-focused social support services to assist officers in situational difficulty.

There have been various incidents of utmost significance that reflect the need for psychological intervention in the police service. The general objectives of counselling are to help police officers grow in self-confidence, understanding, self-control and ability to work effectively.

#### **WAYS TO HELP**

- Limit on-duty work hours to no more than 12 hours per day
- Make work rotations from high stress to lower stress functions
- Make work rotations from the scene to routine assignments, as practicable
- Use counseling assistance programs available

through your agency

- Take frequent, brief breaks from the scene as practicable.
- Talk about your emotions to process what you have seen and done
- Stay in touch with your family and friends
- Participate in memorials, rituals, and use of symbols as a way to express feelings
- Use physical exercise to help work through the stress
- Take care of your body through rest, relaxation, massage etc.
- Pair up with a responder so that you may monitor one another's stress

#### **Conclusion**

The findings of the present study are an encouraging indication to pursue this line of research. Keeping in view the Indian ethos, the psychologist need to explore the scope of indigenous techniques to (a) alleviate the wear and tear of body and mind, (b) enhance the well-being of person. Both these aspects are important, whether we take management view, or the remedial measures. Our results showed that police officers could improve their ability to cope with negative emotions of their job, such as depression, anxiety, and stress through seeking counselling help. Therefore, to reduce psychological problems, it is recommended to implement counselling programs for police officers at regular interval of time.

Study reveals that heavy work load, long hours duty schedule, less break hours affect police officer's mental stress which brings health related disorder like back pain, headache, anxiety depression and isolation with suicidal tendency. Counselling underlines the root cause of what's getting in the way of a happy life.

Mental Health evaluations-This is a key component of a law enforcement wellness plan. Currently, mental health assessments are only made when a problem surfaces either from the officer or the officer's supervisor. I believe that regular mental

health evaluations are appropriate and necessary based on the regular stress levels encountered by law enforcement personnel and are essential to the well-being of police personnel. It is not only the effects of critical incidents that affect officers, but also the daily situations and stressors, which have an effect on mental well-being.

## RECOMMENDATIONS

To deal with the psychological problems of police officers due to their high job stress it is highly recommended to organize counselling workshops, counselling sessions in regular intervals of time. However set-up of counselling centres within the offices should be carried out so that in any need to deal with the stress anyone can reach out for the psychological support and counselling for their betterment. Counselling centres should be well equipped as per the standards. Trained professionals should be hired for the services. Family therapy and group therapy can be incorporated in the counselling sessions.

If a competent wellness program is presented and maintained from the time a police recruit graduates from the academy to throughout his/ or her career, the likelihood is that physical and mental wellbeing can be maintained. I believe that a standardization of policy and procedure relating to police officers' wellness should be implemented. Agencies must implement mandatory involvement of officers in physical and psychological maintenance and evaluation programs.

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# Issues of Juveniles: Juveniles in Conflict with Law



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## ABSTRACT

The term 'Juveniles in conflict with law' refers to any person below the age of 18 years who has come in contact with the justice system as a result of committing a crime or being suspected of committing a crime. The purpose of the study was to explore different types of crimes under the criminal law by Juveniles in conflict with law in the state of Madhya Pradesh, India. In this regard, the census method was used for this study and 324 cases were interviewed through the interview schedule in all sixteen observation homes. The result shows that the highest number of rape (21.9%) cases was reported against the juveniles. This study suggests that parents and school teachers can be helpful to reduce delinquent behavior of juveniles the policymakers can recommend new policies for the reformation of the delinquent Juveniles in our society.

**Keywords:** Juvenile, crime, criminal law

## INTRODUCTION:

Juveniles are still immature and do not think like adults, therefore they are prone to make mistakes or commit crimes that are not fully in their control. Juveniles can break laws for various reasons, and there are a number of factors that can lead them to juvenile delinquency. Factors which are found responsible for the juvenile delinquency are lack of education and illiteracy, lack of knowledge and awareness, family environment and poverty, getting influenced from media, inferiority complex, mental disorders, peer pressure, drugs and alcohol, access to pornography, bad influence and bad neighborhood. Recently, Juvenile delinquency has become an important aspect of criminology. Juveniles have got serious forms of delinquent behaviour which may hamper the stability and social command over society. Many researchers have found that Juveniles are involved

in serious crimes like rape, murder, burglary, riots and other serious offences which include assaulting women to outrage their modesty (Yadav, 2017).

According to National Crime Record Bureau Report (2016), the maximum number of cases under juveniles in conflict with law was reported in the state of Madhya Pradesh with 20.6% (7,369 cases) followed by Maharashtra with 18.4% (6,606 cases) and Delhi UT with 7.0% (2,499) during 2016. On the other side, the number of crimes allegedly committed by juveniles last year 2016 was 7369, increased from 6583 in 2015, with a significant increase in the number of rapes and thefts. The total numbers of 44, 171 juveniles were apprehended in 35,849 cases, out of which 41,826 juveniles were apprehended under cases of IPC and 2,35 juveniles were apprehended under cases of SLL during 2016 (Crime in India,

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## Author's Intro:

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2016). Juvenile reforms such as Child-Saving Movement focused their attention on urban poor and working-class youths. The experts argued that class background was a significant explanatory variable for delinquent propensities. However, to some resources, delinquency is also quite common among middle-class youth. The land dispute, inferiority complex, large family size, income disparity and friend's motivation are the main determinants of the juvenile heinous crime (Mahmood & Cheema, 2004). In this regard, the work of Shaw and McKay (1942) is cited as the most significant contribution in this area. Theory also explains that certain factors in the environment produce violent and delinquent behavior and that crime and delinquency are confined to certain specific areas or ecological zones and that an individual is likely to be a delinquent or criminal if he comes *from* or lives among people in the crime or delinquent zones (Akers & Sellers, 2004; Bernard et al., 2010).

#### **WHO IS 'JUVENILES IN CONFLICT WITH LAW'?**

**Juvenile Justice (care and protection of children) Act, 2015** of Sec. 2 (13) defines 'Child or Juveniles in conflict with law' means a child who is alleged or found to have committed an offence and who has not completed eighteen years of age on the date of commission of such offence.

According to Legal Dictionary (2018) 'The behavior of a minor child that is marked by criminal activities, persistent antisocial behavior, or disobedience which the child's parents are unable to control.'

According to Cyril Burt (1955) "A child is to be regarded as a delinquent when his anti-social tendencies appear so grave that he becomes or ought to become the subject of the official action."

#### **REVIEW OF LITERATURE**

Various studies on juvenile violence and delinquency have attempted to justify the magnitude of the problem to society. The results indicate that parents who are lower in self-control and whose children have had more extensive involvement in officially recorded delinquency report greater

exasperation regarding their children (Meldrum et al., 2017). According to Odekunle (1986), the school also holds that apart from access to success-goals varying with the socio-economic status of the individual, individuals also differ in their innate ability to acquire professional expertise in criminal or violent activities. In another study number of people under the same circumstances may desire to commit violent crimes, not everyone will actually commit the crime to the same extent (Cullen and Agnew, 2011). According to Oloruntimehin (1973) studies of juvenile delinquency in some cities, the largest concentration of juvenile offenders have been found in that part of the city with comparatively better the housing, the so-called low density areas, than in the more disorganized areas of the city. Akers & Seller (2004) revealed that, the ecological explanation tends to be assert that slum by itself causes crime or delinquency or that uneven distribution of wealth, as objectified by the disparity in zones of habitation, cause delinquency or crime. Alleyne & Wood (2013) found that gangs map out their territory with graffiti and intimidate others via threats. They also found that high levels of individual delinquency and the presence of neighborhood gangs were significant predictors of gang-related crime. In one of the studies related to gang and crime was examined, the behavioral, social and psychological factors were associated with gang-related crime (Beth et al., 2014). In another study which examined 12 forms of juvenile delinquency (murder, rape, robbery, aggravated assault, burglary, larceny, auto theft, arson, weapons, sexual offence, drug sale, and drug use) and was found that one thing which was significantly associated with all criminal career outcomes was juvenile drug use (Desi et al., 2014). Moreover, results indicate that social bond (e.g., parent's substance abuse, siblings substance abuse, peers substance abuse and gang membership) play a significant role in the desistance of delinquent behavior and programme completion (Gilmore et al., 2005). Lack of proper family control, conflict in family, situation of residential area, impact of movies etc. are equally responsible for the juvenile delinquency. Consequently, they are involving in many anti-social activities to fulfill their basic

needs and recreation through earning money (Chowdhury et al., 2016). The overall findings revealed that there were higher levels of permissive parenting in the families of delinquent adolescents. It may be because low-income families have many family members that initiated the adolescents to take up some jobs to increase the family income, and this in turn affected their parents' parenting behavior (Moitra et al., 2018). The results showed that rape myths are associated with juvenile rape. Furthermore, rape victim myths were the myth category relating to juvenile rape, rather than rape perpetrator myths (Huang, 2016). In another study, findings suggest that stereotypes can influence judgments in cases involving juveniles and indirectly affect policy-making about juvenile offending (Greene et al., 2017). In Badiora (2015) study findings revealed that encounters with drug and alcohol had the highest functional coefficients among juvenile residents in a post crisis part of the town. Neighborhood gang activities had the highest functional coefficients among juvenile residents in medium-density areas. The study concluded that predictive factors in criminal offending differ from one residential area to another.

**Objectives of the study:**

- To determine the specific age factors for delinquency.

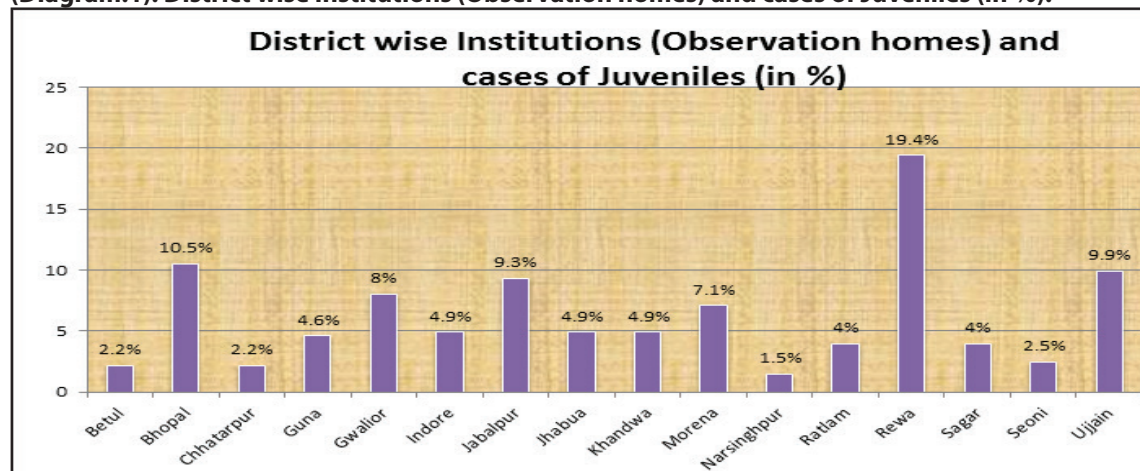
- To understand family status, caste, educational status and residential area of juveniles in conflict with law.
- To explore different types of crimes under the criminal law by Juveniles in conflict with law.

**METHODOLOGY:**

The universe of the present study consisted of the juveniles who committed different types of offence in the state of Madhya Pradesh, India. There were 324 under trail 'Juveniles in conflict with law' interviewed in the total sixteen Government observation Homes of different districts (i.e. Sagar, Jabalpur, Narsinghpur, Seoni, Betul, Ratlam, Indore, Jhabua, Khandwa, Bhopal, Chhatarpur, Guna, Gwalior, Morena, Rewa and Ujjain) in Madhya Pradesh. The selection of the sample was made entirely on the basis of their area of origin. The census method was used for this study and the cases were interviewed through the standardized interview schedule. The collected information analyzed by using appropriate statistical techniques through SPSS. In the brief of research, data has been distributed in frequencies and percentage of Family status, caste, educational status, residential area and different types of crime.

**RESULT AND DISCUSSION**

**(Diagram.1): District wise Institutions (Observation homes) and cases of Juveniles (in %):**





In this diagram (1), it is shown that the maximum cases of juveniles found were in Rewa district's of observation homes with 19.4% and the minimum cases were found in Narsinghpur

District's observation homes with 1.5%.The second highest cases of juveniles were found in the observation home in Bhopal (10.5%).

**Descriptive Analysis of data (Table. 1)**

**Family status of juveniles**

Types of Family	Frequency (N=324)	Percent
Nuclear	231	71.3
Joint	93	28.7
<b>Total</b>	<b>324</b>	<b>100.0</b>

**Caste of juveniles**

Caste	Frequency	Percent
GEN	62	19.1
<b>OBC</b>	<b>93</b>	<b>28.7</b>
SC	67	20.7
ST	80	24.7
<b>Don't know</b>	<b>22</b>	<b>6.8</b>
Total	324	100.0

**Educational status of juveniles**

Educational Status	Frequency	Percent
Illiterate	31	9.6
Primary School	73	22.5
Middle School	98	30.2
High School	97	29.9
Higher Secondary	22	6.8
Pursuing UG	3	0.9
Total	324	100

**Residential area of juveniles**

Residence	Frequency	Percent
Rural	181	55.9
Urban	143	44.1
Total	324	100.0

Table.1. describes about the family status, caste, educational status and residential area of Juveniles in conflict with law and they were apprehended by the police and housed in Observation homes in different districts of Madhya Pradesh.

About family status of juveniles, it has been found that 71.3% juveniles belong to a nuclear family whereas 28.7% juveniles belong to a joint family apprehended by the police.

About the caste of juveniles, it has been found that there are the highest juveniles apprehended by the police from OBC caste with 28.7% whereas 6.8% Juveniles caste have not been known to them.

As we know that education plays an important role in the formation of behavioral pattern particularly among the children at the earlier stages. Here it is interesting to know the relationship of education with nature of offences charged with committed by the juveniles. The table clearly indicates that the highest 30.2% juveniles have passed middle school level while 29.9% passed high school level qualifications.

It is important for any child to have a proper regional environment. Shaw and McKay (1932) found that the delinquents came from particular areas called delinquent areas. Most of the children turn to crime in the absence of facilities in their area. Here, the table shown about residential area of juveniles and indicates that 55.9% juveniles apprehended by the police belong to rural areas whereas 44.1% belong to urban areas.

**Age groups of juveniles apprehended by the police (Table.2)**

Age groups of Juveniles (in Years)	Frequency	Percent
9- 11	04	1.2
12- 14	42	13.0
15- 17	253	78.0
18 and above	25	7.8
<b>Total</b>	<b>324</b>	<b>100.0</b>

Table (2) describes the age of juveniles who have been apprehended by the police and housed in observation homes from different districts of Madhya Pradesh. Today, along with technological and industrial development, children are growing up and are becoming more and more skilful with development. The table clearly indicates that the age groups of 15 to 17 of juveniles are dangerous for delinquency with the percentage of highest with 78.0%. According to this data the age of juveniles '18 and above' are kept as a under trial but they have committed a serious and heinous crime i.e. murder, rape, robbery, dacoity etc., at the age below 18 years.

**Parental status before offence: (Table. 3)**

Parental Status	Frequency (N=324)	Percent
Only Mother	49	15.1
Only Father	22	6.8
No Parents	14	4.3
With Parents	239	73.8
Total	324	100.0

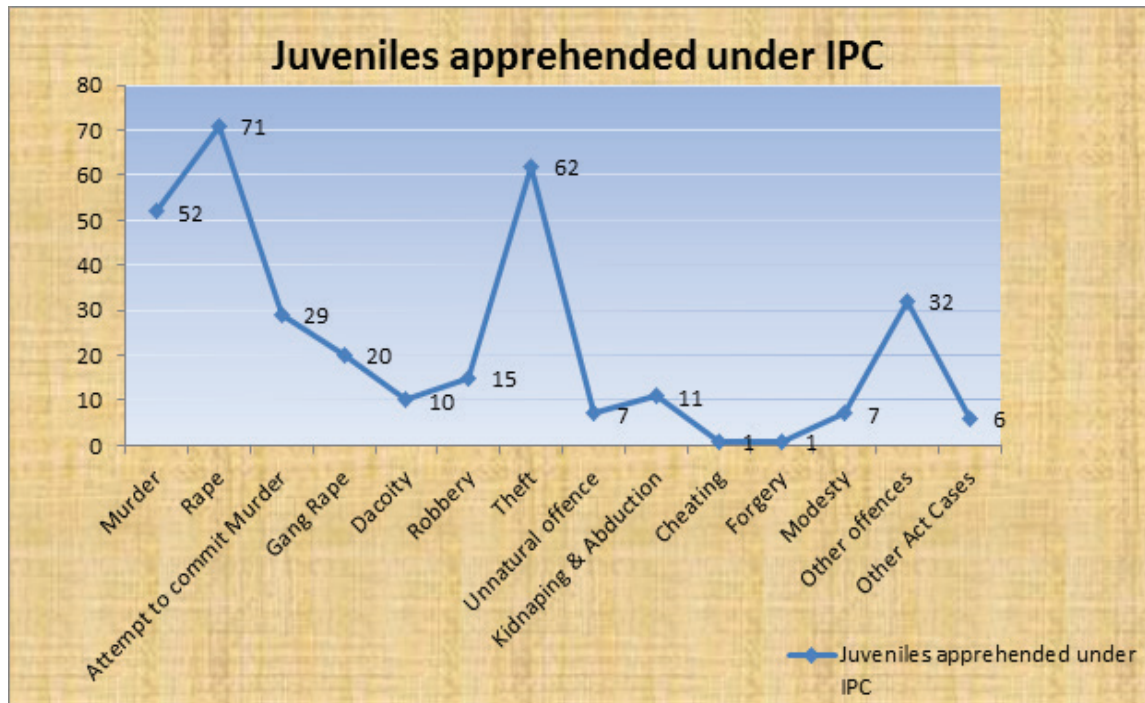
Family and parents of any child or juveniles have special contribution to their lives. In the absence of parents, the child cannot develop properly. The table (3) describes that 15.1% juveniles lived with their mother, 6.8% juveniles lived with their father or 4.3% juveniles have no parents because their parents have died due to certain disease and accident. 73.8% juveniles lived with their parents but due to many reasons became juvenile. Here, the table also shows that juveniles who were living with their mother or father 21.91% cases have lost their father or mother due to certain diseases like cancer, tuberculosis and other serious diseases. In this regard, many juveniles are not under the care and protection of their parents and guardians because of which they have got easily into bad peer groups and have committed different types of crimes in society.

**School dropout Status of Juveniles (Table.4)**

School dropout status (in Years)	Frequency	Percent
Less than 1 year	33	10.1
1-2	42	13.0
3-4	41	12.6
5-6	44	13.5
7-8	09	2.8
9-10	04	1.2
More than 10 Years	03	0.9
NA (School goers and Never been at School)	148	45.7
Total	324	100.0

In this table (4) it is shown about school dropout status of juvenile. Juveniles have attended the school but they have been dropout of their school in some months or years due to many reasons. It may be that, they do not feel comfortable in the school or because of family problems (i.e. Poor family background, low income and death of father and mother in the family). Moreover, in this data it is shown that as about 176 (54.32%) juveniles went to school but later left the school and the same 148 (45.7%) cases, either would have gone to school regularly or would have not gone to school before apprehended by the police. The table shows that, highest school dropout status of juveniles with 13.5% for 5-6 years categories followed by 13.0% for 1-2 years categories, 12.6% for 3-4 categories.. In this study, it has been also found that many juveniles play truant because they do not like going to school or they are involved in jobs as daily wages. Other risk factors included low academic achievement, poor problem solving, low self esteem, dissatisfaction with school, substance abuse etc. The same study found by Siegel and Welsh (2009) about school failure and delinquency are significantly correlated to committed delinquency by the juvenile. School failure or failing to achieve success in school can result in frustration, anger, and reduced self esteem, which may contribute to delinquent behavior.

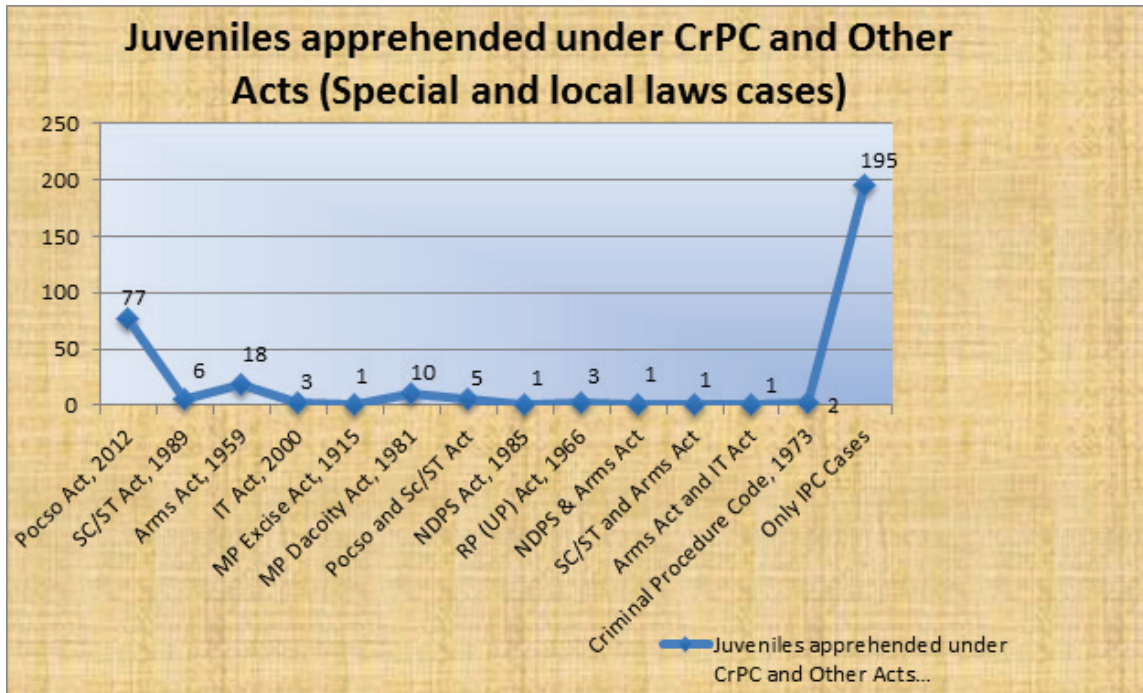
**(FIGURE. 2A): JUVENILES APPREHENDED UNDER INDIAN PENAL CODE (IPC):**



The figure (2a) describes the crime head (IPC Cases) in which juveniles have been apprehended by the police and housed in observation home from different districts of Madhya Pradesh. In this fig., it is shown that crime head (IPC Cases) of the juveniles are highly involved in 71 cases of rape (21.9%) followed by 62 (19.1%) of theft, 52(16.0%) of murder, 29(9.0%) of attempt to commit murder, 15(4.6%) for robbery, 11(3.4%) of kidnapping and abduction, 10 (3.1%) of dacoity, 7(2.2%) of unnatural offences, 7 (2.2%) of modesty, 1(0.3%) of cheating, 1(0.3%) of forgery and 32 (9.9%) of other offences (i.e. abetment to suicide, grievous hurt, gang of thieves, Unlawful assembly, rioting, affray, causing disappearance of evidence of offence, criminal conspiracy, dowry death, dishonestly receiving stolen property, selling minor girl for the purpose of prostitution, extortion, etc.). 6 (1.9%) cases do not apply for IPC cases on Juveniles in which they have been apprehended under only IT Act, NDPS Act, MP Excise Act, and The Railway Property (Unlawful Possession) Act by the police.

This study also explains that most of the juveniles are influenced by the peers group to commit a serious and heinous crime (i.e. murder, rape, robbery, dacoity, theft etc.) and this study also found in rape cases, where mostly offenders and victims, were known to each other for few months or years with good faith and beside that sometimes they used to make a sexual relation for sexual satisfaction. Many juveniles have also kidnapped and abducted female victims for marriage in which mostly female victims were minor. On the other hand, male victims, the juveniles kidnapped and abducted for the ransom because they were professional killers. In robbery, dacoity and theft cases juveniles were involved in drug addiction. The same study, general theory of crime, given by the Gottfredson and Hirschi, indicates that delinquent acts, such as robberies or burglaries, are illegal events or deeds that offenders engage in when they perceive them to be advantageous. Burglaries are typically committed by young male looking for cash, liquor and entertainment, delinquency provides easy short term gratification.

(Figure. 2b): Juveniles apprehended under CrPC and Other Acts (Special and local laws cases)



(Figure. 2b) In the SLL cases of Juveniles have also apprehended by the police with highest percentage of 23.8% (77 cases) of total data of POCSO Act followed by 5.6% of Arms Act, 3.1% of M.P. Dacoity Act, 1.9% SC/ST Act, 0.9 % of IT Act, 0.9 % of RP (UP) Act, 0.3% of M.P. Excise Act, 0.3% of NDPS Act and the same juveniles have been apprehended by the police juvenile on multiple acts that frequency is 5 (1.5%) ‘POCSO and SC/ST Act’ of 324 total data, 0.3% of ‘NDPS & Arms Act’, 0.3% of ‘SC/ST and Arms Act’, 0.3% of ‘Arms Act and IT Act’ and 2 (0.6%) cases of Criminal Procedure Code, 1973 (Crpc). 60.2% total cases were not applied to SLL because they were apprehended under only Indian Penal Code, 1860 by the police.

In the case of POCSO Act, when children committed a crime with victims, victims were below 18 years of age but in multiple cases applicable to juveniles under the ‘POCSO and SC/ST Act’ the victims were less than 18 years and also belonged to the weaker section (i.e. SC/ST communities) in which minor girls were raped by the juveniles. In the case of only SC/ST Act, when juveniles committed a crime with victims, the victims belonged to

weaker section (i.e. SC/ST communities) of our society. While, in the case of IT Act, Juveniles have mostly committed a crime through social networking sites (WhatsApp or Facebook) for communal violence. In the case of RP (UP) Act, juveniles were apprehended by the Railway police and civil police for stealing the railway properties and the case of MP Excise Act, 01 juvenile was apprehended by the police because he was selling alcohol without permission of legal authority. On the other hand, in the case of multiple acts of NDPS & Arms Act juveniles were involved in drug delinquency with peer group as a professional delinquent for earning money and sometimes they used arms (i.e. Desi katta, revolver, gun, knife etc.) for threatening of others. In the cases of both ‘SC/ST and Arms Act’, when juveniles committed a crime with victims, the victims belong to a weaker section and victims were threatened or murdered by using arms by the juveniles. In data representing the case of Criminal Procedure code (Crpc, 1973), Juveniles committed cognizable offences and were apprehended by the police because they were generally involved in criminal activities in their areas and were labeled as habitual criminals

by the police and local people.

## CONCLUSION

In the Indian context, this research indicates that children are highly involved in serious and heinous offences (i.e. Murder, rape, dacoity, robbery, drug delinquency and other offences). In contrast, many criminologists have found negative labels; including troublemaker, mentally ill and; help stigmatize the recipients of these labels and reduce their self- image. Those who have accepted these labels are more prone to engage in delinquent behavior than those whose self- image has not been so tarnished.

In the phase of fast pace of industrialization and globalization, the self-control and parental control that was earlier sufficient to prevent individuals from committing offences has become weak. The primary socialization that functioned through groups such as family, peer groups, traditional neighborhood ties, close kin circles is fast becoming ineffective in the Indian society. All this has led to present trends in juvenile delinquency.

Juvenile delinquency cannot be stopped only through the proper implementation and amendments of Juvenile Justice Act. It is important to make people also parents aware about different reasons for involving delinquency in rural and urban area. Juveniles involved in crimes are not delinquents; in fact, they are victims of society in some cases i.e. robbery, theft, grievous hurt etc. Juvenile delinquency can be stopped at an early stage, provided special care is taken both at home and in the school. Parents and teachers play a major role in training the mind of a child. Instead of labeling them as criminals or delinquents (i.e. thief, robber, dacoit etc.) importance needs to be given on understanding needs of children and give them a scope of modification. The problem of juvenile delinquency like many other social problems is linked up with the imperfections and maladjustment of our society.

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