The Indian Police Journal

"Yours (Police) is the responsibility to maintain the prestige of the Government and protect the honour of the citizens. It is not enough if you only detect crime and bring offenders to book. You must also try to win the affection of the people.... A Police officer or Policeman who loses his head in handling a situation is not fit to be a member of the police force."

- Sardar Patel

'Promoting Good Practices and Standards'

I P J

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Editorial Board

CONTENTS

Editorial

The July-September (2021) edition of the Indian Police Journal (IPJ) is ready for presenting to its true patrons - the readers. It has taken a while coming, but with the pandemic seemingly behind us, subsequent editions will likely have a smoother passage. We hope to get even with the publishing cycle soon!

All through history, the written word has remained a beacon of light, even in the darkest of times. It has connected the philosopher and the practitioner, sitting thousands of miles apart. The IPJ, a flagship publication of the Bureau of Police Research & Development (BPR&D), seeks to serve as a bridge between the wise men & women who have professional wisdom to offer, and the practitioners in the field, who can translate those words into action.

The sheer diversity of subjects that have found their way in different editions of the IPJ, is a measure of the complexities that have come to occupy centre-stage in everyday life. It is equally a testimony to the strength of policing as an instrument of governance and public service, and its ability to adapt to contemporary times.

Each generation of frontline warriors has crafted its own set of tools to engage with the challenges of the day. The IPJ is a compilation of sage thoughts, and sharing of best practices from professionals and academics, but it is equally a tool to chisel and sharpen the tricks of the trade.

This edition, like its preceding numbers, seeks to focus on a wide canvas of professional interest. Between the covers, you will find a range of topics - from issues as diverse as Correctional Administration, Technology, Electronic Evidence, Video Conferencing, Sexual Violence, HR Concerns, Corruption Cases, Leadership, Ballot Paper Case Study, Safe City for Women, Precursor Chemicals, as well as the PoSH Act during Pandemic Times - a veritable slice of a working Police Professional's life!

The world around us is changing ever so often. Each day flags newer areas of policing and security concern. The need to be mindful of the challenges, and keep abreast of possible solutions, was never more before, than it is today. We can hardly fight the battles of tomorrow with tools that have frayed with the

rust of time. In its own limited way, the IPJ seeks to contemporise traditional policing wisdom with the tools of the day.

Nothing will give us greater pleasure than to hear from the readers on how well, or not, the current edition of the IPJ has fulfilled the objectives it set out to achieve. Keep the feedback coming, and we promise to getting better at what we are doing - one written word, at a time!

(Neeraj Sinha, IPS)
Editor in Chief

Management of Prisons and Pre-Trial Prisoners-Dispelling Certain Myths and Some Suggestions for Reforms

R C Arora*

Abstract

International Centre for Prison Studies London(UK) has shown the total global prison population for 216 countries in its World Prisons Brief-2020, for the year 2019, as about 1,10,00,000(11Million), and India has been shown to have a total of 4,78,600)prisoners[(Pre-Trial/UT 3,30,487 (69.05%)+Convicts 1,44,125(30.11%)+Others like civil and preventive detention prisoners)]. While India is shown at 209[th]rank out of 223 countries/jurisdictions included in the compiled list, with35 as the Rate of Imprisonment(Prisoners per hundred thousand population). However, India is shown at 14th rank for the proportion of the Pre-Trial prisoners to total, at 69.1%.Similarly, the country is shown at 85th rank for the occupancy of prisons(118.5%) against the official capacity.

The dominant section of critics, from our country, NGOs and intellectuals included, and abroad, it has been noticed, have been depicting these aspects very uncharitably and unjustly without analyzing the subjects in all such aspects as are highly germane to proper appreciation of the situation of Indian prisons in comparison with other countries in the world.

This article, in an approach hitherto not adopted by the critics for reasons best known to them, illuminates all such areas as shall help the discerning readers of the IPJ and the stakeholders to take a holistic view of the issues involved, before embarking upon an analytical exercise, not based on adequate and cogent facts, and then arriving at misleading and distorted conclusion to the effect that the conditions of Indian prisons, are significantly inconsistent with the human rights of the prisoners. It also highlights the disproportionately higher attention being devoted to the human rights of the accused/criminals at the cost of the rights of the victims of crime in their prolonged quest for justice from the system, and as to how these concerns can be addressed to the legitimate satisfaction of all the stakeholders.

Key Words: *Pre-Trial, Prisoners, Prison, Prison Management, Judicially, Under Trial, Court, Condition of Prisoners*

Introduction

The institutions of Prison and prisoners, in one or the other form, have been as old as the vintage of organized form of human civilization. They have grown in strength with the ever-increasing complexities of socio, economic, political intercourse, and international relations. The codification of laws of crime, criminal procedure and custodial care have evolved a progressive degree of internally acknowledged need to stay well-aligned with

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Author's Introduction:

*   Former DG of HG,CD& DM, DG Prisons and Correctional Services MP, and the Home Secretary to the Government of MP.

the international covenants and protocols respecting the obligation of the nation states to deal with the prisoners in accordance with their basic human/civil rights.

'The World Prison Brief-2020'[1] that analytically depicts the details of prison management in different sovereign jurisdictions across the globe, has estimated a **total of 1,10,00,000(11 million) prisoners** being held in **223 countries** during 2019. That means out of every**701 persons** in the world **1 person** was lodged in prison in connection with his alleged/judicially proven misconduct in conflict with law[2].

The report mentions a total of **4,78,600 prisoners**, comprising **69.1%(3,30,487) undertrial** and **30.11%(1,44,125) convicts**, were lodged in **1,350 prisons** in India during 2019[3]. India has been shown at **209th rank in terms of rate of imprisonment(35) per one lakh(one hundred thousand)** of population; at **4th rank** in term of **absolute number of prisoners**(4,78,600); at **85th rank** in term of **actual occupancy(118.5%)** of prisons against official capacity and placed at **14th rank** in term of proportion of **under-trial(69.1%)** to the total[1].

A good number of authors, scholars, and entities, domestic and foreign alike, have looked into the conditions of prisons and prisoners in India from time to time, and have submitted their findings. It is, however, noticed that in an overwhelming number of these accounts, the conditions of Indian prisons have been largely based **on the analysis of absolute number of prisoners, under-trial and convicts alike, actually lodged in prisons** without factoring in the templates like total number of under-trial prisoners facing trial in the courts from inside the prisons and from outside the prisons, and total number of convicts having been admitted to bail by the judiciary, **total population of the country**, total registration of **crime**, total **persons being arrested** in a year, and the **ease of getting bail** from the competent courts or even from the enforcement officer effecting the arrest. This line of approach by the scholars to the subject of prisoners, by selective use of data available in public domain, has led to the emergence of a very **skewed and misleading** picture of the narrative in public domain about the so called highly unsatisfactory conditions of prisoners detained in Indian prisons.

Review of the popular narratives about conditions of prisons and prisoners in India

Some of the most notable narratives that emerge from a rigorous scrutiny of the contributions made by a dominant section of the learned intellectuals and professionals about the conditions of prisoners in Indian prisons, are discussed below-

1. That the Indian prisons are **grossly overcrowded** leading to less than expected compliance with the minimum standards required to be observed under the extant international covenants and protocols besides the constitution of our country.

2. That the Indian Prisons are occupied by an **alarmingly high proportion of Under-trial/Pre-trial prisoners,** and they have been languishing in jails for an exceedingly long period of incarceration, Hereby amounting to violations of their fundamental and human rights besides the rights under the extant international protocols and covenants.

3. Huge number of under-trial accused are being detained in Indian prisons in blatant violation of the judicially settled principle of ' **Presumption of Innocence of an under-trial accused till proved guilty in the court'**

4. That **expeditious disposal of long pending trial cases** in the courts shall eliminate the problem of overcrowding and disproportionately higher detention of undertrial accused in the overall prison population in our prisons.

Some of the observations of these learned scholars are described below:

Maja Daruwala and Vijay Raghavan in their article, published in '**the Indian Express**' dated 28th December2020, captioned '**Systemic neglect ensures that prisons act as warehouses for the marginalized**'[4] make the following observations in the article:

''Our prisons are full of people in compromised states. Around **70 per cent are undertrials** and more than 75 per cent come from marginalized sections. They know little about the law. Even if they are aware, they have little recourse to any complaints mechanism and must fall back on an uneven legal aid system. If at all a prisoner can reach the judge, they are either too busy with their routine work or too enmeshed in the local culture to act.''

Mukesh Rawat in his article in **India Today** dated 12th April 2021, captioned '**Poor, young and illiterate: Why most Indian prisoners fight long lonely battles for justice**'[5] makes the following observations:

''Statistics on Indian prisons reveal that **68 per cent** of prisoners in India are those who have not been convicted by any court for a crime. Many among them have to wait for years before the trial court even begins hearing their cases.''

''This high number of undertrial prisoners comes as a paradox as the Indian judicial system claims to work on the principle that a person is presumed to be innocent until proven guilty.

And even the Supreme Court has held that bail to an undertrial prisoner is a right.''

Ms Madhumita Dhanuka from the **Commonwealth Human Rights Initiative**, in her article in the Supreme Court Cases[6], titled '**Undertrial Prisoners and the Criminal Justice System**' makes the following observations:

''**Undertrial prisoners constitute a significant majority of the prison population(65.7%). All the 2,45,244 persons who are within prisons as undertrials are deemed to be innocent in the eyes of the law. How can a system that calls itself just and fair, justify depriving 2,45,244 "innocent" people of their liberty?**''

Shri Vijay Raghavan while reviewing the '**India Justice Report-2019**' in his article in the **Hindustan Times** dated 12th November 2019[7], captioned '**Prison Reforms crucial to refining the justice system**' makes the following remarks:

''Some of the findings are stark: the average prison occupancy is 114%; 19 out of 36 states and UTs (where data was available; J&K, which was recently bifurcated, has been included as a state) have more than 100% occupancy. …………''.''**One of the major reasons for the large number of undertrial prisoners is pendency of cases in courts**.''

Teesta Setalvad in her column in **the Indian Express** of 26th May 2021[8], under the heading of '**The Pandemic has put the spotlight on inhumane conditions in Indian Prisons**'-

''The prison, it is famously said, holds a mirror to society. The conditions within prisons, to

stretch this analogy, reflect the quality of any democracy. By that yardstick, India needs soul-searching. Not only has our collapsing criminal justice system ensured a mockery of reasonably speedy trials but tardy and often skewed(if not biased) investigations and prosecutions have ensured that undertrials languish in jails for decades. Courts rarely step in to ensure a thorough investigation and robust prosecutions, or a time-bound conclusion to trials.

The figures are there for all to see: Overcrowded jails, poor hygiene conditions, and little or no statutory monitoring of the state of affairs.''

A critical analysis of the views expressed by the learned authors above reveals

- those critics are limiting their analysis and observations based on the actual number of undertrial prisoners lodged in the prisons only without bothering to take cognizance of the most crucial feature of the detainees in this category to the effect that a whopping **98.81% under-trial accused out of the total (2,77,57,356) have been admitted to bail** and they are, thus, pursuing their trial from outside with no disabilities. This fact alone proves most unambiguously that in India the principle of '**innocence of an accused till proved guilty**', is being observed most sincerely in India.

- that as against **22,15,397 persons convicted** by the courts in 2019[9] alone, the total number of convicts detained in Indian prisons as on 31-12-2019 was a meagre **1,44,125** including those detained from the previous years[10].This important fact again proves that not only the undertrial accused but a huge proportion of the **convicts are also being allowed the benefit of bail** by our learned judges

pending final disposal of their appeal petitions.

- that during 2019 a total of **52,13,639** accused persons were arrested by the police, and **58,74,562** accused were charge-sheeted in the courts, calculated @ the minimum rate of one accused per case. Against this huge undertrial number of accused for **just one year** merely **3,30,487** undertrial accused persons, including those detained from the previous years, were lodged in the prisons as on 31st December 2019, that is a meagre figure of 5.62%. Rest 94.38% of the undertrial were enlarged on bail by the courts.[11] *. This crucial piece of empirical evidence proves once again* **that in India the principle of 'innocence of an accused till proved guilty', is observed most seriously.**

- The very fact that over **98.8%** of the total undertrial accused **(2,77,57,356)** are facing trial from outside the prisons decisively rules out any hope that **expediting the pace of disposal of pending trial cases shall lead to substantial reduction in the overcrowding of prisons and worrisome high share in prison population since it will only add to number of convicts from outside in the prisons, in natural consequence of faster disposal of court pending cases. Therefore, but for timely expansion of official prison capacity commensurate with the expedited pace of court disposals, the same shall lead to unintended consequences for the availability of infrastructure to host enhanced number of convicts.**

- that as per the figures shown by the **National Judicial Data Grid** as on 15th May 2021[12],out of **11,42,349 appeals**/

revisions filed by the convicts the total number of convicts lodged in the prison was merely **1,44,125,** out of which about **70%(1,00,888)** were appellants as ascertained from certain state prison authorities. That means even after conviction, out of the total appellants of **11,42,349** as many as 10,41,461**(88.68%)** were pursuing their appeals from outside the jails after having been admitted to bail by the trial courts under section 389 of The CrPC **(Act 2 of 1974). And the rest about 1,44,125-1,00,888 = 43,337(11.32%)convicts were pursuing their appeals from within the prisons. This piece of concrete evidence once again proves that not to speak of the undertrial even the convicts(88.68%) are also being extended the benefit of the principle of 'Presumption of innocence of an accused till proved guilty' till the disposal of their appeal petitions, is being observed in India sincerely.**

- that the **rate of imprisonment(35 per one hundred thousand of population)** in our country is one of the lowest in the world with **209th rank out total 223** countries/jurisdictions covered by the **'World Prison Brief 2020'**, covering data up to 2019[1].

- that the **occupancy of prisons** in our country is **118.5%(global rank 85)** which is comparable or better than more resourceful countries in the world.

- that in term of **total undertrial prisoners** we are far behind many developed countries with much lesser population[1].

- that in correlation to the **total incidence of crime**, the number of **arrests** made in connection therewith, and the number of **cases pending trial** the figures of

prisoners, both in the undertrial and convict categories, pale into insignificance not only with the corresponding figures in developed countries but also the global averages as well.

- that most of the international narrative documented by various NGOs and other official entities about prisoners in India has also been influenced and shaped by the narrative propagated by the domestic intelligentsia.

The line of scrutiny adopted by these worthy intellectuals, and inferences drawn by them there from, therefore, appear to be far removed from the ground realities in our country and abroad. **This approach to the study of institutions of prisons and imprisonment also characterizes its predominant attention for the accused criminal with no corresponding concerns raised for the millions of the victims of crime waiting for years together in quest of justice from the system.**

CONDITIONS OF PRISONS AND PRISONERS IN INDIA

This article deals with the subject from the view of critically scrutinizing the hitherto held dominant narrative of the conditions of prison in India in public discourse. It is based on the rigorous examination of a plethora of such empirical evidence as is relevant for a dispassionate and objective analysis. It attempts to dispel, in my considered view decisively, some of the erroneously held perceptions owing primarily to selective use of material germane to the holistic understanding of this subject.

In India, the subject of Prisons and custodial institutions is covered as **Entry-4 of the State List in the 7th Schedule t**o the constitution and is extracted below-

''4. Prisons, reformatories, Borstal institutions and other institutions of a like nature, and persons detained therein; arrangements with other States for the use of prisons and other institutions.''

The states are, therefore, enjoying autonomy in the setting up, and managing Prisons and other custodial institutions commensurate with their state specific requirements, in accordance with the broad provisions of the **Prison Act, 1894(Act 9 of 1894)**, read with state specific statutes and the **Prison Manuals** prepared under the extant Prison statutes.

In India, a **total of 1,350 Prisons** are being maintained by all the states as shown in the **'Prison Statistics-2019'**[13] by the NCRB/MHA New Delhi,

An overview of some vital aspects of Prisons, on perusal of ' **Prison Statistics-2019**[13]**,** in India reveals the following noteworthy facts about different aspects of prison management in our country-

TOTAL NUMBER OF PRISONS:- There were **1,350 prisons** of all categories in India during 2019 as against 1,339 in 2018.

PRISONERS PER ONE HUNDRED THOUSAND POPULATION IN INDIA AS ON 31-12-2019

UNDERTRIAL	–	24
CONVICTS	–	10.54
OTHERS:	–	0.46
TOTAL	–	35

OFFICIAL PRISON CAPACITY AND OCCUPANCY:-

OFFICIAL CAPACITY-ACTUAL OCCUPANCY RATE
(Table-1)

YEAR	OFFICIAL CAPACITY	ACTUAL OCCUPANCY	OCCUPANCY RATE
2017	3,91,574	4,50,696	115.1%
2018	3,96,223	4,66,084	117.8%
2019	4,03,739	4,78,600	118.5%

The above figures show that actual occupancy of prisons has not been unusually higher than the official capacity.

Composition of Prison Population in India (31-12-2017- 31-12-2019)
(Table-2)

Year	Convicts	Undertrial	Others	Total
31-12-2017	1, 39,149 (30.87%)	3, 08,718 (68.50%)	2,829 (0.63%)	4,50,696
31-12-2018	1, 39,488 (29.93%)	3, 23,537 (69.42%)	3,059 (0.65%)	4,66,084
31-12-2019	1, 44,125 (30.11%)	3, 30,487 (69.05%)	3,968 (0.83%)	4,78,600

The above Table depicts that the composition of prisons under different categories has not undergone any significant change during the last three years.

DETENTION PERIOD OF UNDERTRIAL PRISONERS AS ON 31-12-2019

1 Day to 1 year: 2,44,841**(74.08%)** INCLUDING -

1,22,254 **(36.99%)**Up to 3 Months;

68,447 **(20.71%)**from 3 to 6 months; and

54,140**(16.38%)** from 6 to 12 months.

TOTAL UNDER-TRIAL PRISONERS RELEASED ON BAIL/ACQUITTAL DURING 2019

TOTAL UNDERTRIAL PRISONERS RELEASED:**15,98,218**

Released on bail: 14,99,028**(93.79%).**

Released under section 436A CrPC: **635.**

Extradited to foreign countries: **14.**

Released on acquittal or acquittal on appeal: **61,359.**

Gender Composition of Prison Population as on 31-12-2019

MALE: 4,58,687 **(95.84%)**

FEMALE: 19,913**(4.16%)**

TOTAL: 4,78,600

TOTAL ADMISSIONS TO PRISONS DURING 2019:- 18,86,092

TOTAL PRISONERS RELEASED FROM PRISONS:- 14,07,492(74.62%)

The above figures of **admissions** and **release** from the prisoners reveal that as many as **394%** of the **total prisoner population(4,78,600)** was added to prisons while **294%** of the **total prisoners population** was also released from the prisons during 2019. **That confirms that average period of the detention of individual prisoner in the prison has been incredibly low**.

In terms of prisoners per hundred thousand of prison population, according to the **World Prison Brief (2020 last published edition**) by the **International Centre for Prison Statistics London[1]**, India occupies the following position, depicted along with some other notable countries,-

Total Prison Population and Rate per 1,00,000 population
(Table-3)

Country Name	Total Prison Population & Rank	Rate per 1,00,000 population and rank
USA	20,94,000(1)	639 (1)
PR CHINA	17,10,100(2)	121(129)
BRAZIL	7,55,274(3)	357(19)
INDIA	**4,78,600(4)**	**35 (209)**
RUSSIA	4,77,515(5)	330(25)
THAILAND	3,07,910(6)	443(9)
TURKEY	2,81,094(7)	335 (23)
INDONESIA	2,62,480(8)	96 (149)
MEXICO	2,15,232(9)	166(91)
PHILIPINES	2,15,000 (10)	200 (71)
IRAN	1,89,000(11)	228(56)
BANGLADESH	83,107(21)	48(201)
UK & WALES	77,859(22)	130(116)
PAKISTAN	77,275(23)	38(206)
GERMANY	57,600(32)	69(176)
AUSTRALIA	41,060(43)	160(97)

CANADA	38,570(46)	104(143)
NEPAL	26,118(58)	86(160)
SRI LANKA	28,915(55)	135(112)

India occupies 4th and 209th rank in term of total prison population and rate of imprisnment, respectively.

PRE-TRIAL PRISONERS IN SOME NOTABLE COUNTRIES& %
TO TOTAL PRISONERS
(Table-4)

Country Name	Total Pre- Trial Prisoners	% of total prisoners
USA	4,82,100	22.5%
INDIA	**3,23,537**	**69.1%**
BRAZIL	2,53,963	32.9%
PHILIPPINES	1,41,422	75.1%
TURKEY	1,00,003	43.1%
RUSSIAN (Fed)	96,727	18.6%
MEXICO	79,660	39.2%
BANGLADESH	71,717	81.3%
THAILAND	60,214	16.2%
IRAN	56,650	25.1%
NIGERIA	51,993	70.2%
PAKISTAN	48,008	62.1%
SOUTH AFRICA	47,728	29.3%
ARGENTINA	43,597	45.9%
MOROCCO	32,732	39.1%
ITALY	18,872	31.0%
SRI LANKA	14,068	60.2%

NOTE:- The figures depicted in the above table are at slight variance with those in the 'World Prison Brief-2020', presumably owing to a slight difference in the timing of preparing this report by the learned author Roy Walmsley of ICPR[14].

PRE-TRIAL PRISONERS (%) IN SOME NOTABLE COUNTRIES
(Table-5)

Country	Pre- Trial prisoners %	Rank
LIBYA	90%	1
BANGLADESH	81.3%	2
PHILIPPINESS	75.1%	7
INDIA	**69.1%**	**14**
PAKISTAN	62.1%	23
SRI LANKA	58.9%	29
NEPAL	55.1%	34

TURKEY	42.0%	59
DENMARK	39.7%	67
CANADA	39.0%	73
BELGIUM	37.1%	77
NEW ZEALAND	36.5%	84
FRANCE	32.4%	100
AUSTRALIA	31.9%	103
BRAZIL	30.1%	109
USA	23.4%	137
RUSSIA	22.0%	143
INDONESIA	19.9%	154
UNITED KINGDOM	15.4%	177
JAPAN	12.1%	197

India ranks 14th in % term of Under-Trial prisoners population as against total.

PRISON OCCUPANCY (%) TO OFFICIAL CAPACITY IN SOME COUNTRIES (Table-6)

Country	Prison Occupancy (%) to Official Capacity	World Ranking
CONGO	616.9%	1
PHILIPPINESS	463.6%	2
THAILAND	339.1%	6
BANGLADESH	195.8%	25
INDONESIA	193.5%	27
SRI LANKA	190. 6%	29
UAE	158.9%	44
BRAZIL	151.9%	50
IRAN	153.0%	51
PAKISTAN	133.8%	64
MALAYSIA	131.9%	67
SOUTH AFRICA	124.8%	77
INDIA	**118.5%**	**85**
BELGIUM	117.2%	87
AUSTRALIA	112.2%	95
ITALY	105.4%	103
DENMARK	103.4%	105
CANADA	102.2%	107
U K	101.4%	114
USA	99.8%	119

India ranks 85th in term of actual occupancy as against the official capacity.

ANNUAL ARRESTS IN INDIA

A total of **52,13,639** accused persons were arrested in the year 2019. Out of these a total of 31,12,639 persons were arrested for their involvement in 32,25,701 '**cognizable offences/cases**'(defined in **Section 2(c) of the CrPC** (extracted below)under the **Indian Penal Code** (IPC)(Act 45of 1860)while a total of 21,00.,765 persons were arrested in a total of 19,30,471 cases under the **Special & Local Laws (SLL)** during the year[11].

''**2. Definitions. In this Code, unless the context otherwise requires,-**

(c) **"cognizable offence"** means an offence for which, and **"cognizable case"** means a case in which, a police officer may, in accordance with the **First Schedule** or under any other law for the time being in force, **arrest without warrant**.''

Registration and Pendency of Court Trial Cases

According to the '**Crime in India-2019**'(**'Crime in India-2019**[11]**)**, as many as **51,56,172cognizable offences [defined above in section 2(c) of Criminal Procedure Code, 1973 (2 of 1974), to be denoted as the CrPC here in after in this document)]** were registered by the police during the year 2019 in India. Out of the same **32,25,701 (62.6% of the total)** cases were registered under various offences made punishable under the Indian Penal Code [45 of 1860, to be denoted as the IPC hereafter], and **19,30,471 (37.4% of the total) cases were registered under the Special and Local Laws,** hereinafter referred to as **SLL** cases.

INCIDENCE OF CRIME IN INDIA

Per one hundred thousand of population (1,00,000), on average, **385.5** criminal cases were registered in the country during the year 2019.

Some of the notable categories of offences committed during 2019 were-

(Table-7)

Types of offences	No of cases
Offences against body	10,50,945
Murder	28, 918
Kidnapping and abduction28,918	28,918
Offences against Women	4,05,861
Offences against children	1,48,185
Offences against Schedule castes	45,935
Offences against Schedule tribes	8,257
Cybercrimes	44,546
Human Trafficking	2,260

Offences against property	8,02,372
Offences against trafficking in illegal arms	66,305
Offences against Trafficking in illicit drugs and psychotropic substances	57,867
Environment Related offences	34,671

The above inputs help to appreciate the **wide range of offences** being committed by the criminals and gravity thereof across the country.[11]

DISPOSAL OF CASES FROM INVESTIGATION AND COURT-TRIAL

Charge-sheets filed in the courts against the accused under Section 173 CrPC-

A total of **35,56,801** accused persons, including some from those arrested in the previous years, were **charge-sheeted** in the courts in various offences under the IPC.

A total of **8,37,075** persons were **convicted** by the courts while as many as **13,78,322** persons were **acquitted** under the **IPC cases.**

A total of **23,17,761** accused persons, including some from those arrested in the previous years, were **charge-sheeted** in the courts in various offences under the **SLL.**

A total of **13,78,322** persons were **convicted** by the courts while as many as **3,00,231** persons were **acquitted** under the **SLL cases.**

It means that about a total of 8,37,075 (in IPC cases)+13,78,322(In SLL cases)= 22,15,397 accused persons get convicted every year.

CONVICTION RATE IN SOME IMPORTANT CRIME CATEGORIES
(Table-8)

Crime type	Conviction rate

MURDER	41.9%
RAPE	27.8%
KIDNAPPING & ABDUCTION	24.9%
RIOTING	19.4%
HURT	30.6%
NARCOTIC DRUGS & P S Y C H O T R O P I C SUBSTANCES ACT 1985 –	76.8%
THE ARMS ACT	66.7%

PENDECY OF CASES IN THE COURTS

The Honorable Supreme Court of India has implemented a highly commendable initiative by way of launching an online **NATIONAL JUDICIAL DATAGRID (NJDG)**[12] under their overall project of digitalization of courts across the country, captioned **e-courts**. One can access the status of cases pending **on a real time basis** on their dashboard. This website is user friendly for all the stakeholders including all entities pursuing research studies in one or other aspects of the broader subject of '**Reforms in criminal justice system'**.

PENDENCY IN SUBORDINATE COURTS

The NJDG[12] in its Dashboard as on 15-05-2021(FN), in its pendency of cases for **Subordinate courts** shows the position as under:-

PENDENCY PERIOD CIVIL AND CRIMINAL CASES (SUBORDINATE COURTS)
(Table-9)

Pendency Period (in years)	Civil cases (%)	Criminal cases (%)
0-1	27,63 , 649(26.84%)	76,70,686(27.24%)
1-3	34,40,167(33.41%)	87,21,676(30.98%)
3-5	17,12,848(16.63%)	46,68,212(16.58%)
5-10	16,63,111(16.15%)	44,82,569(15.92%)
10-20	5,62,430(5.46%)	21,72,577(7.72%)
20-30	1,17,190(1.28%)	3,74,031(1.28%)
Above 30 years	37,807(0.37%)	64,993(0.23%)
Total	**1,02.97,202**	**2,81,54,744**

Table-9 depicts pendency of **civil cases as 26.78%** and **criminal cases73.22%** out of the total pendency in the **Subordinate courts.**

SOME NOTABLE CATEGORIES OF PENDENCY DETAILS IN SUBORDINATE COURTS
(Table-10)

Case Category	Civil	Criminal
Original	76,48,389	2,77,57,356
Appeal	4,89,698	3,97,388

PENDENCY IN HIGH COURTS

The NJDG in its Dashboard on 15-05-2021, in its pendency of cases for all the **25High Courts** shows the position as under:-

PENDENCY PERIOD CIVIL AND CRIMINAL CASES (HIGH COURTS)
(Table-11)

Pendency Period (in years)	Civil cases (%)	Criminal cases (%)
0-1	6,64,342(15.96%)	3,54,288(21.44%)
1-3	10,56,539(25.38%)	4,29,999**(26.02%)**
3-5	6,78,005(16.28%)	2,23,508(13.52%)
5-10	8,66,601(20.81%)	2,96,260(17.93%)
10-20	7,13,705(17.14%)	2,89,759(17.53%)
20-30	1,09,422(2.6%)	41,903(2.6%)
Above 30 years	75,043(1.8%)	16,866(1.02%)
Total	**41,63,657**	**16,52,583**

Table-11 depicts that pendency of **civil cases at 71.59%** and **criminal cases at 28.41%** out of the total pendency matters in High Courts .

SOME NOTABLE CATEGORIES OF PENDENCY IN HIGH COURTS
(Table- 12)

Case Category	Civil	Criminal
Writ Petitions	**13,27,511**	**54,089**
First Appeal	**3,82,997**	**529**
Appeal	**3,54,399**	**5,50,259**
Revisions	**67,331**	**1,94,173**

TOTAL APPEALS AND REVISION PETITIONS IN CRIMINAL CASES PENDING IN DISTRICT AND HIGH COURTS AS ON 31-12-2019
(Table-13)

Types of Courts	Total Cases
District Court	3,97,388
High Court	7,44,961
Grand Total	11,42,349

LIBERALISED PROVISIONS OF LAW FOR THE GRANT OF BAIL

'BAILABLE' and **NON-BAILABLE OFFENCES'** have been defined by Section 2(a) of the CrPC as under-

Section 2(a) in The Code of Criminal Procedure, 1973

(a) " **bailable offence"** means an offence which is shown as bailable in the **First Schedule**, or which is made bailable by any other law for the time being in force; and **"Non-bailable offence"** means any other offence.''

1st Schedule of the CrPC enumerates **408 offences** punishable under the Indian Penal Code(45 of 1860). Out of these a total of **214 (52.45%)**offences are classified as '**NON-BAILABLE'**, including those reconstituted/re-classified through the individual State amendments, and which are in force within the territorial jurisdiction of that state. Remaining**194(47.55%)** offences are classified as '**BAILABLE'**.

In respect of the offences punishable under the **Special and Local Laws (SLL) t**his Schedule provides that- 'Offences punishable with Death sentence or Imprisonment for life or with **Imprisonment for 3 years and above' will be treated as 'NON-BAILABLE'.**

In '**Bailable offences'** the accused arrested can be released on '**Bail'** by the **Police Station In-charge** after observing the extant codal formalities while in '**Non-Bailable Offences'**, barring some exceptions, the accused arrested is granted **Bail by the competent court**.

'**Bail is a rule and jail is an exception'** is a

judicial principle that was laid down by the Supreme Court in their landmark judgement, delivered on 20-09-1977, in the **State of Rajasthan v. Balchand@ Baliya[15], and reiterated thereafter from time to time.**

The law of bail in India, has seen quite a few significant amendments after enunciation of this principle for the arrest and grant of bail, as a general rule, by the Apex court. **Some notable amendments to the bail law are described below**-

Insertion of Section 436A in the CrPC – This new section is reproduced below-

Section 436A CrPC- Maximum period for which an undertrial prisoner can be detained-

Where a person has, during the period of investigation, inquiry or trial under this code of an offence under any law (not being an offence for which punishment of death has specified as one of the punishments under the law) undergone detention for a period extending up to one-half of the maximum period of imprisonment specified for that offence under the law, he shall be released by the court on his personal bond with or without sureties; Provided that the Court may, after hearing the Public Prosecutor and for reasons to be recorded by it in writing, order the continued detention of such person for a longer than one-half of the said period or release him on bail

Provided further that no such person shall in any case be detained during the period of investigation inquiry or trial for more than the maximum period of imprisonment provided for the said offence under that law

Section 41A Notice of appearance before police officer–

(1) The police officer shall, in all cases where the arrest of a person is not required

under the provisions of subsection (1) of section 41, issue a notice directing the person against whom a reasonable complaint has been made, or credible information has been received, or a reasonable suspicion exists that he has committed a cognizable offence, to appear before him or at such other place as may be specified in the notice.

(2) Where such a notice is issued to any person, it shall be the duty of that person to comply with the terms of the notice.

(3) Where such person complies and continues to comply with the notice, he shall not be arrested in respect of the offence referred to in the notice unless, for reasons to be recorded, the police officer is of the opinion that he ought to be arrested.

(4) Where such person, at any time, fails to comply with the terms of the notice or is unwilling to identify himself, the police officer may, subject to such orders as may have been passed by competent Court on this behalf, arrest him for the offence mentioned in the notice.

(Inserted by Act 5 of 2009 with effect from 1-11-2010)

Section 389 CrPC- Suspension of sentence pending the appeal; release of appellant on bail-

(1) Pending any appeal by a **convicted person**, the Appellate Court may, for reasons to be recorded by it in writing, order that the execution of the sentence or order appealed against be **suspended** and, also, if he is in **confinement, that he be released on bail**, or on his own bond. Provided that the Appellate Court shall, before releasing on bail or on his own bond a convicted person who is

convicted of an offence **punishable with death or imprisonment for life or imprisonment for a term of not less than ten years**, shall give the opportunity to the Public Prosecutor of showing cause in writing against such release; Provided further that in cases where a convicted person is released on bail it shall be open to the Public Prosecutor to file an application for the cancellation of the bail.

(2) The power conferred by this section on an Appellate Court may be exercised also by the High Court in the case of an appeal by convicted person to a Court subordinate thereto.

(3) Where the convicted person satisfies the Court by which he is convicted that he intends to present an appeal, the Court shall;

1. where such person, being on bail, is sentenced to imprisonment for a term not exceeding **three years**, or

2. where the offence of which such person has been convicted is a bailable one, and he is on **bail,** order that the **convicted person be released on bail** unless there are **special reasons** for refusing bail, for such period as will afford sufficient time to present the appeal and obtain the orders of the Appellate Court under Sub-Section (1), and the **sentence of imprisonment** shall, so long as he is so released on bail, be deemed to be **suspended**.

(4) When the appellant is ultimately sentenced to imprisonment for a term or to imprisonment for life, the time during which he is so released shall be **excluded** in computing the term for which he is so sentenced.

The above legal position about the arrest and bail of the accused arrested in the non-bailable offences can be summarized as under-

(a) The arrest of an accused in certain specified **non-bailable offences** during investigation by the investigation agency, could be dispensed with by the Officer-in-charge of a Police Station if the accused is willing to join investigation as per the terms of notice issued to him.(**Section 41 A CrPC**)

(b) The under-trial accused, if he is willing, is entitled to grant of bail by the court in cases where- 1. He has undergone **one half of sentence** prescribed for the offence he has been accused of. the 2. He has **undergone maximum sentence** provided under the law for the offence he has been charged with. (**Section 436A CrPC**)

(c) Grant of bail by the court to the arrested **accused and convicted** person pending disposal of his appeal alike, will generally be the Rule, and denial of bail will be an exception.(**Law laid down by the Supreme Court of India: the State of Rajasthan v. Balchand@ Baliya[15] as far back as 23-09-1977 and reiterated thereafter from time to time**).

(d) A **convicted person** shall also be granted bail on grounds of pendency of his appeal in a specified class of cases subject to the satisfaction of the appellate court (**Section 389 CrPC**).

The judiciary in India, has been following the above cardinal principle of '**Bail, not Jail**

'enunciated by the Honorable Supreme Court of India in the case of **the State of Rajasthan v. Balchand@ Baliya**[15] **as far back as 23-09-1977 and reiterated thereafter from time to time.** It is amply borne out by the figures for the accused detained in the prisons under-trial or inquiry or investigation.

It may be worthwhile to note that as against a total of **2,77,57,356** criminal cases pending in the **Subordinate courts after excluding a total of 3,97,388 cases of appeals pending in district courts**, a total of **3,30,478 persons** were lodged in the prisons as **undertrial** as on 31-12-2019. It works out to be **1.19%** of the total undertrial accused persons, taking a minimum of 1 accused person per under-trial case.

As against a total of **22,15,397 accused convicted** in one year(2019) the cumulative total of the convicted persons (including those undergoing sentences from the previous years) lodged in the prisons as on **31-12-2019** was a meagre **1,44,125 convicts for all the years**, amounting to **6.50%** of all the persons convicted by the courts in one year alone(2019)[16].

Analysis of the total figures for the undertrial prisoners further reveals that they also enjoy the following advantages on the culmination of the trial leading to ACQUITTAL:-

(i) Under **section 35 of the Prison Act 1894(IX of 1894)** (extracted below), the **prison labor** mandated for the criminal prisoners in execution of their sentence of Rigorous Imprisonment is **not applicable to the Undertrial prisoners:**

''**35. Employment of criminal prisoners.—** (1) No criminal prisoner sentenced to labour or employed on labour of his own free will shall, except for an emergency with the sanction in writing of the Superintendent, be kept to labour for more than **nine hours** in any one day.

(2) The Medical Officer shall from time to time examine the labouring prisoners while they are employed and shall at least once every fortnight cause to be recorded upon the history-ticket of each prisoner employed on labour the weight of such prisoner at the time.

(3) When the Medical Officer is of the opinion that the health of any prisoner suffers from employment on any kind or class of labour, such prisoner shall not be employed on that labour but shall be placed on such other kind or class of labour as the Medical Officer may consider suited for him.''

(ii) Under **Section 428 of the CrPC**, extracted below, an Undertrial prisoner when CONVICTED is sentenced rigorous/simple imprisonment, the **period spent by him in prison during investigation, inquiry, and trial, shall be deducted** from the period of imprisonment he has been sentenced with:

"**428. Period of detention undergone by the accused to be set off against the sentence or imprisonment-** Where an accused person has, on conviction, been sentenced to imprisonment for a term , not being imprisonment in default of payment of fine], **the period of detention, if any, undergone by him during the investigation, inquiry, or trial of the same case and before the date of such conviction, shall be set off against the term of imprisonment imposed** on him on such conviction, and the liability of such person to undergo imprisonment on such

conviction shall be restricted to the remainder, any, of the term of imprisonment imposed on him.''

It amounts to **changing the harshness of the sentence of rigorous imprisonment** recorded by the trial court for the period being set off because during that period as an undertrial when he was not mandated to render prison labor under the extant law.

So, the above legal provisions confer very **substantial advantages upon an Undertrial prisoner** as compared to those enlarged on bail and facing court trial from outside the prison though it adversely impacts the ability of the correctional administration department to run a good number of rehabilitation programme, involving rendering of labour as a component of the programme, owing programme to unavailability of the prisoners in such numbers as are eligible to participate in these programmes.

RELATIONSHIP BETWEEN THE PENDING APPEALS/ REVISION PETITIONS OF THE CONVICTS AND THEIR LESSER PROPORTION IN PRISON POPULATION

A critical examination of proportion of **undertrial prisoners (69.1%)** and the **convicted prisoners (30.11%)** reveals that-

(i) Out of all the accused facing trial, approximately **2,77,57,356**@ 1 accused per case, **3,30,487** only **(69.1%)** of total prison population) that is 1.19% are facing trial from inside the prisons, and **98.81%** (**totalling 2,77,57,356**) are facing trial from outside prisons after having been enlarged on bail by the competent courts.

(ii) As against **1,44,125 convicted** persons lodged in jails (**30.11%** of total prison population) and a total of **11,42,349 convicts** are pursuing their

appeals/revision petitions in the Appellate and Revision courts (High Courts:7,44,961 +3,97,388 in District Courts). Out of the total convicted prisoners lodged in the jails (**1,44,125**) about **70%(1,00,888)** are pursuing appeals against their conviction from within the jails and while **10,41,461 convicts(88.68)** are pursuing their appeals from outside the jails after having been admitted to bail by the courts under section 389 of the CrPC. It means only **11.32% of the total convicts detained in prisons are pursuing their appeals/ revision petitions from within the prisons.**

(iii) It is also worth attention that every year, as seen in the **'Crime in India 2019'**, publication of the NCRB/MHA for the year 2019,as many as a total of **8,37,075** (in IPC cases)+**13,78,322** (In SLL cases)= **22,15,397** accused persons get convicted every year, while a meagre number of **1,44,125 convicts, amounting to merely 6.5% of total convicted persons in one year, are actually detained in prisons for all the years put together**.

OFFICIAL PRISON CAPACITY AND POPULATION OF COUNTRY-GLOBAL PICTURE

Imprisonment has been practised as one of the penalties across the globe during the entire period of human civilization documented hitherto. Hence, erecting prisons, by whatever name, and their maintenance for the safe and secure lodging of the prisoners has been an important area of application of public funds for all the governments. However, the availability of the **official prison capacity** and quality thereof, has been varying in different jurisdictions owing to various reasons.

In India, the data available in the **'Prison Statistics' for 2019**, shows availability of

official prison capacity of 4,03,739 in a total of **1,350 prisons** in our country.

Viewed against India's population of **136.64 Crores=1,366.4 million[17]**, it works out to be **29.5 per one lakh (one hundred thousand) of population** or **prison capacity for one in number prisoner as against a population of 3,384**.

THE GLOBAL PICTURE FOR PER UNIT PRISONER OFFICIAL CAPACITY TO POPULATION RATIO

The global picture for this ratio for some notable countries is given below-

(Table-14)

Country Name	Per unit official capacity to population ratio
USA	157
THAILAND	224
BRAZIL	278
TURKEY	297
RUSSIA	305
IRAN	439
PHILIPPINES	503
AUSTRALIA	614
SRI LANKA	737
P R CHINA	799
U K	867
CANADA	970
INDONESIA	1,031
NEPAL	1,095
GERMANY	1,450
BANGLADESH	1,962
PAKISTAN	2,803
INDIA	**3,384**
WORLD	**701**

Against the global average of 701 population (2019) for one unit of official prison capacity India has one unit of official prison capacity

for every 3,384 persons of population.

To attain the global average of per unit prison capacity India for its population of 136,64,17,754 in 2019[18] should have an official prison capacity of 19,49,240 as against the existing official prison capacity of 4,03,739 in 2019[10].

It means that as on 31-12-2019 the official prison capacity for every unit of prisoner was merely 20.71% of the global average.

IMPRISONMENT AND JUSTICE FOR VICTIM OF CRIME PERSPECTIVE

The '**Crime in India 2019**'[11],shows some aspects of crime figures in India as under-

1. A total of 51,56,172 **cognizable criminal cases** were registered in our country comprising of **32,25,701**(62.6%) under the Indian Penal Code(IPC) and **19,30,471** (37.4%) under the Special and Local Laws(SLL).

2. A total of **52,13,404** accused persons were **arrested** for their involvement in all these cases.

3. A total of **58,74,562** accused persons were **charge-sheeted and sent for trial** to the courts in all these cases.

4. In the offences under the Indian Penal Code, the **All-India Conviction Rate by the courts was 50.4%**.

5. **The conviction rates in some of the heinous crime categories during 2019 were**: Causing voluntary grievous hurt by dangerous weapons or means **(17.7%);** Dacoity **(18%);** Extortion and blackmailing **(22.4%);** Attempt to murder **(25.3%);** Criminal misappropriation **(26.9%);** Rape **(27.8%);** Human Trafficking **(28.1%);** Fraud **(31.3%);** Robbery **(32.9%);** Criminal intimidation

(35.7%); Kidnapping for ransom **(36.4%);** and Murder **(41.9%).**

6. The conviction rate, as revealed above, in some of the **heinous crime categorie**s has been poor and disappointing for the victims of crime seeking justice from the justice dispensation system.

COGNIZANCE BY THE SUPREME COURT OF INDIA ABOUT LOW RATE OF CONVICTION

The Honorable Supreme Court of India has also, from time to time, echoed their serious concern about the failure of prosecution cases in trial courts. In their landmark judgement in 2014 in the case of **State of Gujrat v. Kishanbhai Etc.**[19] issued following directions for compliance by all the states-

''21. On the culmination of a criminal case in acquittal, the concerned investigating/prosecuting official(s) responsible for such acquittal must necessarily be identified. **A finding needs to be recorded in each case, whether the lapse was innocent or blameworthy**. **Each erring officer must suffer the consequences of his lapse, by appropriate departmental action**, whenever called for. Taking into consideration the seriousness of the matter, the concerned official may be withdrawn from investigative responsibilities, permanently or temporarily, depending purely on his culpability. We also feel compelled to require the adoption of some indispensable measures, which may reduce the malady suffered by parties on both sides of criminal litigation. Accordingly, we direct, the Home Department of every State Government, to formulate a procedure for taking action against all erring investigating/prosecuting officers''

Every case of acquittal is a case of injustice to one or the other litigants. It is very frustrating for the victim of crime to fail to get justice from the system after pursuing his criminal accusations for awfully long period of trial in courts of justice.

CO-RELATION BETWEEN THE PROABABILITY OF SECURING CONVICTION WITH THE PRESENCE OF THE UNDERTRIAL ACCUSED WITHIN THE PRISON OR OUTSIDE ON BAIL-

It should have been remarkably interesting to get research findings about the extent of variation in the **probability of conviction** of an undertrial accused on conclusion of trial proceedings **with reference to his presence in the prison or outside on bail.** The review of literature does not show any worthwhile research projects having been implemented by researchers and research organizations of high repute.

The author has occasion to watch some suggestive trends related to this aspect of inquiry while heading the **Madhya Pradesh Prison organization**. But no well-structured research study could be conducted by way of collection of relevant data and its interpretation as per extant methodology. However, during the extensive tours of the state to inspect Prisons, it was very cogently established **that the probability of conviction of an undertrial accused detained in a prison during the trial period or during the crucial period when prosecution evidence was being adduced, gets more enhanced by roughly about as much as 50% than the accused facing their court trial proceedings after getting enlarged on bail by the court.**

The apparent explanation for this incredibly significant trend suggests that the undertrial accused can, presumably, make use of all sorts of influence on the prosecution witnesses, and, thereby, weakening the quality of evidence of the crucial prosecution witnesses finally adduced before the courts. And, as a direct

consequence thereof getting acquittal either under the benefit of the doubt or failure of the prosecution to prove the charges according to the rigorous standard of 'proved beyond doubt'.

Incredibly significant value of these informal findings, impacting the **probability of conviction** of the accused , calls for **more research studies by reputed entities to validate** the same for larger application and use of such research-based inputs on policy formulation respecting the detention of undertrial accused during such period when material prosecution witnesses are being taken up for examination in the court.

NEED FOR JUDICIOUS BALANCING OF THE JUSTICE SEEKING INTEREST OF THE VICTIMS OF CRIME AND THE RIGHTS OF THE DEFENDANTS FOR A JUST AND FAIR TRIAL-

We have seen that a dominant section of critics unduly focuses their scrutiny/examination on the **Disproportionately higher number of Undertrial prisoners in Prisons, in violation of the judicial dictum of ' to be presumed innocent till adjudged guilty by the court and Overcrowding in Indian prisons.**

We can analyze these aspects as under-

Disproportionately higher number of Undertrial prisoners in Indian Prisons-

The data discussed in preceding paras establishes the following ground realities very emphatically-

- That out of as many as **2,77,57,356** accused are facing trial in the **subordinate courts**@ minimum rate of 1 accused per case as per the dashboard of the **National Judicial Data Grid** on 15-05-2021 (FN).[20]

- The total **Undertrial prisoners** in Indian prisons as on 31-12-2019 were **3,30,478**.

- **58,74,562** cases were submitted in the courts for trial during 2019, and @ 1 accused per case a total of **58,74,562 accused** persons added to undertrial status for one year period of 2019.

- It means as against the total **3,30,487** undertrial prisoners, amounting to only **1.19%** of the cumulative total population of undertrial accused **(2,77,57,356) and 5.62%** of the total added **(58,74,562)** for the year 2019 alone were detained in the prisons as on 31st December 2019.

- This factum of abysmally low percentage of undertrial population in prisons **(1.19%)** is directly co-related to **exceptionally low rate of conviction** in heinous crimes. The crimes like murder **(41.9%)**; rape **(27.8%);** kidnapping for ransom **(36.4%);** human trafficking **(28.1%);** robbery **(32.9%)** and dacoity **(18.0%),** mentioned indicatively, during the year 2019, amply bear it out. It indisputably reveals the less than expected ability of the justice system to dispense justice to the victims of grave crime as per their legitimate expectations from the system.

- In the absence of any research studies on the co-relation between the status of accused lodged in prison or out of prison, reliance is being placed on the informal inferences drawn by on the-author himself, based on his field/inspection visits as Head of the Prison & Correctional Services department in the State of MP. **These informal inferences strongly suggest very significantly positive correlation between the probability of conviction and the presence of the undertrial in prison during crucial phase of recording of evidence of material prosecution witnesses.**

- The Honorable Supreme court of India

has also raised their serious concern from time to time, for the **poor rate of conviction** in criminal trial in general and heinous crimes in particular.

- The justice dispensation system is committed to dispensing justice to the litigants in an equanimous manner. Any **undue tilt, perceived, in favor of one party** to the litigation, even if unintended, is inconsistent with the most sacred values enshrined in our constitution related to dispensation of justice to all.

- As shown in preceding paras the fact of **enlargement of as many as 98.81% of undertrial accused persons on bail** by the courts, apparently tilts the scale in favor of the undertrial accused unintended with corresponding disadvantage to the victims of crimes.

- Exceptionally **low rate of convictions** generates the inescapable tendency in the victims to rethink about their hitherto fairly unshakable confidence in the ability of the system to dispense justice to him/her at a reasonable pace.

- The incredibly low rate of conviction also dilutes the institution of Imprisonment from its **deterrence effect** against the potential criminals besides hurting the **efficacy of the social defense institutions** of the society, legitimately expected to rise effectively to the formidable challenges from the criminals to ensure safety and security of citizens and their property.

- The approach to castigating the higher proportion of Undertrial population(3,30,487=69.1%) in the total prison population (**4,78,600**) without relating to it to the total number of under-trial accused (**2,77,57,356**) any benchmark, tends to create an

intended or otherwise, perception about the apparent favoring of the undertrial accused persons at the cost of legitimate right of the victims of crime to get justice for the crimes committed against them with very good probability of securing conviction of the arraigned accused. In reality, the undertrial accused are enjoying the immense benefit of getting bail during the pendency of their trial proceedings, in accordance with the principle of **'Bail, not Jail'** enunciated by the Apex court in 1977 and iterated thereafter from time to time.

- The fact that a meager 1.19% **(3,30,487)** of the total undertrial population of accused persons (**2,77,57,356**) is detained in prison at any point in time, also effectively demolishes the accusation of the scholars, Human Rights activists, NGOs and others that ' an unusually high number of accused are being detained in Indian prisons in violation of the judicial dictum of **'Presumption of Innocence of an accused till held guilty by the court'**.

- Comparing India for its higher proportionate component of undertrial accused persons (**69.1%)** in the total prison population without factoring in the vital factor of the real proportion of the undertrial prisoners out of the total undertrial population in the country**(2,77,57,356) and total population of two countries that reveals population of India as about 400% of USA population**[21],I am afraid, cannot lead to sustainable inferences when examined against the most vital template of dispensing justice to the victims of crime. For example, in the **USA**,**22.5%** of the prison population, numbering **4,82,100**are undertrial prisoners, as per the **'World Prison Brief 2020'**, while

India with **3,30,487** undertrial prisoners is shown to have over **69.1%** of undertrial prisoners. This is little over three-time higher proportion than in the USA despite having 68.55% of the Under-Trial prisoners in the USA, term of in absolute numbers

- It is imperative that any approach to such empirical analysis must factor in not only the total undertrial accused population but also the official capacity of prison accommodation per one hundred thousand of population and the grand total of the Undertrial accused facing trial from within the prisons and from outside the prisons after having been admitted to bail by the competent courts. That will give a more realistic status of imprisonment and proportion of undertrial prisoners to the convict prisoners population in prisons.

- Another template could also be evolved for analysis of prison population and composition thereof issues, that specifies **what is the most reasonable benchmark of undertrial prisoners proportion to the total prison population** while striking a judicious balance between the rights of the justice seeking victims of crime and the defending undertrial accused population.

- The oft repeated suggestion given by the critics that expeditious disposal of cases in courts shall lead to a substantial reduction in the proportion of undertrial accused in the prisons and a consequent reduction in over-crowding in the jails, fails its critical scrutiny when viewed against the fact that 98.81% **(2,77,57,356)** under-trials are facing prosecution from outside the prisons after having been admitted to bail under the most religiously judicial principle of **'Bail, Not Jail'.** Any

acceleration in the court disposal, without accretion to official prison capacity, which is sure to get in more convicts in the jails out of the staggering 98.81% facing trial from outside the prison and add to total number of inmate population significantly.

- It could also be considered that at least the **accused persons facing trial for their involvement in the commission of heinous offences punishable with not less than 10 years of imprisonment, should be held in prisons especially for the period the material prosecution witnesses are being taken up for evidence**. It is very likely that it will improve the conviction % significantly to the legitimate expectations of the victims of crime besides other stakeholders.

Keeping in view, the serious ill consequences of low rate of conviction on the overall social defense of society, it is imperative that the policy of **'Bail not Jail'** to the undertrial accused is revisited with a view to its realignment with the larger public interest of social defence of society in general and the need for expeditious and meaningful justice for the victims of crime in particular.

SOME INITIATIVES THAT MAY CHANGE THE PROPORTION OF UNDERTRIAL ACCUSED IN PRISON POPULATION

With the benefit of an insight into the finer nuances of the composition of prison population that has been the direct outcome of implementation of the principle of **'Bail Not Jail'** even to the immense disadvantage of the victims of crime seeking justice from the system for years together with disappointing results, we can identify many **initiatives that can impact the composition complexion of the prison population**. Some of the illustrative initiatives could be as under-

1. **Ensuring detention of the convicts in the prisons-** We have discussed in the preceding paras that out of **22,15,397** accused persons, assuming 1 per case convicted during **2019**, a meagre number of **1,44,125** convicts that is **6.50 %** all persons convicted in one year including those in detention from the previous years. Rest of them are either those punished with fine only or those who have been **admitted to bail** under section 389 CrPC pending disposal of their appeals.

2. Out of the total convicts **(1,44,125)** in prisons about 70% **(1,00,888)** are those whose **appeals are pending** in the appellate courts. It means merely **43,337** convicts are undergoing imprisonment whose appeals against convictions have been exhausted.

3. As per National Judicial Data Grid website figures for the pending appeals, as on 15-05-2021(FN)[20], a total of **11,42,349 appeals** were pending [District courts: 3,97,388 + High Courts: 7,44,861=11,42,349). At the rate of minimum one convict per appeals a total of 11,42,349 convicts were involved in all these appeals. Taking into account **1,00,888 (11.32%) convicts pursuing their appeals from prisons**, the number of convicts pursuing appeals from outside prisons are **10,41,461** that is **88.68%** of convicts involved are pursuing their appeals from outside the prisons.

4. The perusal of foregoing facts about the incarceration of accused facing prosecution and those convicted by the courts makes striking revelations that not only a very meagre% of undertrial accused (**98.81%**) but convicts **88.68% of convicted persons are also not in detention in prisons in India.**

5. Grasping the real import of the above figures of the undertrial and convicts having been enlarged on bail read with the extremely poor rate of conviction as discussed in preceding paras (murder (41.9%); rape (27.8%); kidnapping for ransom (36.4%); human trafficking (28.1%), robbery (32.9%) and dacoity (18.0%), mentioned indicatively), we can straightway find that the legitimate interests of the victims of crime stand compromised in as much as their quest for seeking justice against the perpetrators is concerned. This calls for serious introspection with a view to bringing about a very judicious balance between the legitimate interests of the criminals and the victims of crime.

6. This judicious balance can be achieved in many ways. But **detaining the undertrial in prison during the period the material prosecution are being taken up by the prosecution for evidence could be good solution to getting evidence on record without the undue influence of the accused on the prosecution witnesses**. To keep this period to the minimum feasible, the courts should schedule all the material witnesses for prosecution for recording of their evidence in an unbroken session of a limited length of period assessed as reasonable. This will not only ensure more efficient disposal of court trials but shall also inspire immense confidence of the victims of crime in the justice dispensation system not only in reality but also in perception too. This practice will also **disincentivize the abnormal incidence of seeking repeated adjournments** despite amendment to the CrPC and the directions of the Honorable constitutional courts from time to time. The very fact

that the undertrial will get benefit of this detention period as set off against the final sentence of imprisonment (section 428CrPC) should make it acceptable and viable to strike a judicious balance between the litigants.

7. The low proportion of convicts in the prisons, that erroneously and artificially distorts the actual position of exceptionally low incidence of imprisonment in our country, can be addressed by **enacting a pre-condition to the eligibility for filing appeals against conviction to the effect the convict has remained in detention up to 20% of the sentenced imprisonment on the date of filing appeal. The period spent in detention, if any, during investigation or court trial would also be taken into account for computation of this 20% of sentence period.** Thus, with the implementation of this suggestion the proportion of convicts and undertrial shall reflect the composition of prison population much more aligned to the human rights of both the parties to the litigation.

8. It may be pertinent to mention here that the **concept of paying penalty or assessed liability, in full or part at the time of filing appeal,** is not foreign to Indian jurisprudence. It has been duly incorporated in many laws like the revenue laws of the country. The provision to this effect in the **Income Tax Act, 1961** (Act 43 of 1961) and the **Customs Act 1962** (Act 52 of 1962)are extracted below for ready reference-

Income Tax Act 1961

''Form of appeal

The CBDT had substituted the Rule 45 of Income-tax Rules, 1962 relating to filing of

1. Form of appeal to CIT(A) vide Income-tax (3rd Amendment) Rules, 2016.

Pre-deposit of tax

Before filing the appeal, the **taxpayer should pay the tax determined as per the return** of income filed by him.

If no return of income is filed, the **taxpayer should pay tax equal to the amount of advance tax payable** by him. However, on application made by the taxpayer, the Commissioner of Income-tax (Appeal) may exempt the taxpayer from payment of tax''

before filing the appeal. Such benefit is granted if good and sufficient reason is proved by the taxpayer for non-payment of tax before filing the appeal.

The Customs Act 1962

''SECTION 129E. Deposit of certain percentage of duty demanded or penalty imposed before filing appeal.

The Tribunal or the Commissioner (Appeals), as the case may be, shall not entertain any appeal,

(i) under subsection (1) of section 128,**unless the appellant has deposited seven and a half per cent. of the duty**, in case where duty or duty and penalty are in dispute, or penalty, where such penalty is in dispute, in pursuance of a decision or an order passed by an officer of customs lower in rank than the 32 [Principal Commissioner of Customs or Commissioner of Customs].

(ii) against the decision or order referred to in clause (a) of sub-section (1) of section 129A,**unless the appellant has deposited seven and a half**

per cent. of the duty, in case where duty or duty and penalty are in dispute, or penalty, where such penalty is in dispute, in pursuance of the decision or order appealed against;

(iii) against the decision or order referred to in clause (b) of sub-section (1) of section 129A,**unless the appellant has deposited ten per cent. of the duty**, in case where duty or duty and penalty are in dispute, or penalty, where such penalty is in dispute, in pursuance of the decision or order appealed against :

Provided that the amount required to be deposited under this section shall not exceed rupees ten crores.''

Provided further that the provisions of this section shall **not apply to the stay applications and appeals pending before any appellate authority** prior to the commencement of the Finance (No. 2) Act, 2014.]

A careful examination of the above noted proposed initiatives tends to reveal great potential for a paradigm shift in the composition of prison population in Indian prisons and optimism for improvement in the overall quality of the justice dispensation system in our country to the satisfaction of the legitimate expectations of the stakeholders in general and the victims of crime in particular.

PRISONERS AND POPULATION RATIO-2019

Total World population: 771,34,68,100

Total World Prisoners population: 1,10,00,000

RATIO: 701 (One unit of official prison capacity against 701 persons)

Thus, globally for every 701 persons official

capacity for one prisoner has been created.

Overcrowding in Indian Prisons-Myth and the truth

An overview of some vital aspects of Prisons, on perusal of 'Prison **Statistics-2019,** by the National Crime Record Bureau/MHA, New Delhi, in India reveals following noteworthy facts-

TOTAL NUMBER OF PRISONS:- There were **1,350 prisons** of all categories in India during 2019 with a total prisoners population of **4,78,600**.

The perusal of the above statistical depiction reveals following noteworthy trends/ characteristics of prison capacity and overcrowding therein as on 31-12-2019-

1. During the last 3 years actual occupancy of prison has been hovering **between15 to 18% in excess** of the official capacity.

2. Over **74%** of prisoners have been in prisons for periods ranging from 1 day to 1 year only.

3. **Against the global average of 701 population (2019) for one unit of official prison capacity India has one unit of official prison capacity for every 3,384 persons of population.**

4. **At the global average of per unit prison capacity India for its population of 136,64,17,754 in 2019[22]should have an official prison capacity of 19,49,240 as against the existing official prison capacity of 4,03,739 in2019[23].**

5. **It means that as on 31-12-2019 the official prison capacity for every unit of prisoner was merely 20.71% of the global average.**

6. The analysis of figures of **admissions** and **release** from the prisoners

reveals that as against a **total 4,78,600 prisoners** held in the prisons that **394%** of the **total prisoner population** was added to prisons while **294%** of the **total prisoners population** was released from the prisons during 2019. **That confirms that average period of the detention of individual prisoner in the prison has been incredibly low**.

7. As against **total undertrial prisoners population** of 3,30,487 on 31-12-2019, as many as **14,99,028(93.79%)** out of the total released prisoners numbering 15,98,218, were released on **bail** from the prisons during the year. It means **485.5%** of the total under-trial prisoners(**3,30,487**) were released from jails on bail granted by the competent courts. It also confirms that **'Bail, Not Jail'** principle enunciated by the Honorable Supreme Court in 1977**[State of Rajasthan v.Balchand@ Baliya[15]** is being implemented by the judiciary most generously.

8 At 118.5% occupancy rate of the official capacity India ranks at 85th position out of the 223 countries ranked by the **'World Prison Brief-2020'.**

9 At Prisoners to Population of country India ranks **209th** out of 223 countries with a rate of imprisonment at **35** per one hundred thousand(One lakh) of population.

10. As against the ratio of official prison capacity per unit of population in the USA (157), Russia (305), China (799), UK (867), Australia (614), Canada (970), Germany (1,450), Thailand (224), Brazil (278), Sri Lanka (737), Nepal (1,095), Bangladesh (1962), **India has official capacity of 1 prisoner For every 3,883** of population, (Calculated on the basis of Prison statistics in **'World Prison Brief-2020'** and Population of Countries Projected by the UN for 1st July 2019[24].

11. The global average population for official capacity in 2019 for 1 prisoner was 701 persons. That means the official capacity for 1 prisoner in India was**3,883 persons**, that is **20.71%** of the global average figures. That is again a strong manifestation of the principle of **'Bail, Not Jail'** being the rule in Indian justice dispensation system.

12. Out of a total of **2,77,57,356** under-trial prisoners@ minimum rate of 1 accused per case(total pending trial cases being **2,77,57,356,** merely 3,30,487**(1.19%)** of the total) are facing trial from the prison while **98.81%** are facing prosecution from outside the prisons after having been admitted to bail by the courts. It proves beyond any doubt that India has been very conscious of not detaining accused person till the pendency of their court trial in deference to the judicial dictum of **'Presumption of innocence an accused till proved guilty in the court'.** Hence, bare minimum of the undertrial accused is detained in prison on adequate and cogent grounds of in the larger interest of social defense of the society and with a view to ensuring the presence of the accused to face trial.

13. The exceptionally low proportion of the undertrial accused being present in prisons has direct **correlation with equally low rate of conviction** in the courts in such heinous crimes like Rape (27.8%), Dacoity (18.0%), Extortion/ Blackmailing (22.4), Human trafficking (28.1%), Kidnapping for ransom (36.4%), Murder (41.9%), to cite some illustratively.

14. The pendency of an overwhelming number of **2,77,57,356** criminal cases

in the courts does not seem to have any bearing to the extent of occupancy of prisons especially by the undertrial accused.

The above characteristics of prison occupancy, thus, decisively belies erroneously projected phenomenon of worrisome extent of overcrowding in Indian prisons.

The stereotyped depiction of Indian prisons being hugely overcrowded is not supported by empirical pieces of evidence discussed in the preceding paras. It should rather be described as

'the relatively lower pace of expansion of prison capacity with due weightage for the total number registration of cognizable offences (51,56,172), total number of accused arrested(52,13,404), charge-sheeted in the courts (58,74,562), total accused persons convicted in one year(22,15397), total population of our country (136.6 Crores_1,364 million), as seen from its incredibly low proportion of the global average of one unit prisoner official capacity (20.71%) as seen from the status as on 31-12-2019, the current level of prison infrastructure is presenting an urgent call to their expansion commensurate with the operational requirement of well-functioning criminal justice system.'

There may be some states where the overcrowding could be significantly higher than the national average of 118.5% but that cannot be applied uniformly to all the 28 states and eight union territories of India. However, it is pertinent to mention here that to protect the prisoners against COVID-19 infections, as also suggested by the judiciary, a slew of initiatives is being implemented including the release of the prisoners on parole for a period over and above their entitlement by relaxation of the

extant rules. Though no figures have been compiled for the total prisoners population as on date, yet it is reasonably assumed that the liberal grant of the benefit of parole has helped to bring down total prisoners population significantly. And the status of prison occupancy (118.5%) of the official capacity is understood to have also come down significantly.

EXAMINING SUGGESTIONS AND RECOMMENDATIONS RELATED TO THE ELIMINATION OF OVERCROWDING IN INDIAN PRISONS

The widely spread stereotyped narrative about prisons in India propagates the erroneously presumed existence of overcrowding of alarming magnitude in Indian prisons where the undertrial prisoners have been languishing in prisons for the denial of bail by the courts and exceptionally slow pace of disposal of court pending cases.

The Administrative Staff College of India, Hyderabad, in their study of Court pendency, conducted on behalf of the government of India, Ministry of Law and Justice, New Delhi, under the caption of

"ANALYSIS OF CAUSES FOR PENDENCY IN HIGH COURTS AND SUBORDINATE COURTS IN MAHARASHTRA" in their report numbered as 118548/2018/NM, dated 02-03-2018, has made detailed recommendations. Some notable recommendations are-

   i. Practical guidelines be evolved to help judiciary in dealing with absenteeism-marking repeat absenteeism as perjury, hearing in absence, fines, imposing a statute of limitation.

   ii. Litigant friendly courtrooms, as for over half the litigants, it is the first time that they have had a direct

encounter with the justice system.

iii. Additional capacity through more judges.

However, the report is silent about the official capacity addition to the prisons commensurate with the likely addition to number of convict prisoners in natural consequence to expedited pace of disposal through the implementation of the recommended measures.

The ASCI in their study, also does not seem to have explored the utilization of huge capacity of the Bar with registered members, as per statement of the President of Bar Council of India recently, in excess of 20 lakhs, for the expeditious disposal of court pendency of huge magnitude.

The **National Judicial Data Grid (NJDG)**[25] in its Dashboard as on 15-05-2021(FN), has shown a total of **3,84,51,946 pending cases** (**Civil**:1,02,97,202+**Criminal: 2,81,54,744)**, in the SUBORDINATE COURTS, while **58,16,240** pending cases (**Civil**:41,63,657+**Criminal**:16,52,583) in all the High Courts. It is well-nigh understood that these assets of the Bar in term of total registered advocates, remain **grossly underutilized**, leading to inordinate delay in the disposal of court pendency expeditiously. It is imperative that services of all the available learned members of the Bar are utilized to the maximum extent which, in turn, will obviate the need to grant repeated adjournments of the court proceedings besides accelerating the court disposal very significantly.

Recommendations of the ASCI, substantially to the same effect, have been observed from the wide spectrum of such scholars in India and abroad as have lamented existence of most unsatisfactory conditions in Indian prisons amounting to blatant violations of the fundamental and human rights of the undertrial

prisoners. Sadly enough, no worthwhile concern is noted in their recommendations for the victims of the crime committed by the undertrial accused who alone are found worthy of their concern.

It is an indisputable fact that an **accelerated pace of disposal of the court pending cases is going to worsen the problem of overcrowding in our prisons if no attention is paid to the expansion of the official capacity of prisons as much 98.81% of the undertrial accused are facing trial from outside the prisons.** Outcome of expedited process of court disposal shall certainly improve the relatively low proportion of **convict prisoners (30.11%)** as against the significantly higher proportion of the **undertrial prisoners (69.1%)** in the prisons. It will be a good measure to improve our undertrial convict prisoner ratio. But this approach will be creating far more problems for the prison administration departments across the country than it will be solving if the proposed solutions are not implemented in integration with the expansion of prison capacity correspondingly.

CONCLUSION

The discussion of conditions of prisons and prisoners in India in the preceding pages has thrown up very revealing characteristics of conditions of prisoners in Indian prisons. Some of the notable empirically sustainable inferences are given below-

1. The **stereotyped criticism** of conditions of prisons and prisoners in India by a section of intelligentsia like the so-called **overcrowding of alarming dimensions**, and **huge number of under-trial prisoners** languishing in prisons purely because of socio-economic and cultural biases, do not stand scrutiny when examined against a plethora of relevant empirical evidence. The most notable

lacuna in their description is their attempt to generalize their adverse findings based primarily on the analysis of a miniscule portion of under-trial population of undertrial accused persons lodged in the jails **(1.19%),** as the whopping **98.81%** of the remaining under-trial accused population generally remain outside the prisons to pursue their court trials after having been admitted to bail in accordance with the principle of ' **Bail, not Jail'** enunciated by the Honorable Supreme Court in their landmark judgement in the case of **[State of Rajasthan v.Balchand@ Baliya[15]**, and reiterated thereafter from time to time, being implemented by the judiciary most generously.

2. Empirical evidence most cogently demonstrates **that not only the prisons in India are not over-crowded with huge number of undertrial accused but it also proves that undertrial accused face court trial from outside the prison generally as a rule** with about **1.19%** of the total only being detained in prisons for cogent and adequate reasons. Thus, **'Bail, not Jail'** principle has been implemented by the judiciary sincerely.

3. The overwhelming population of under-trial population **(98.81%)** remaining on bail to face the trial also conclusively proves that the judicial dictum of **'Presumption of innocence of an accused till held guilty by the court'** is also being honored in accordance with the underlying spirit behind it by the criminal justice system of our country.

4. Similarly, it has also been established unambiguously that **not only the undertrial accused, generally, face trial from outside but the convicts also do**

to the extent of 88.68%, outside the prison on bail pending disposal of their appeal against conviction.

5. The incredibly **low proportion** of undertrial prisoners**(1.19%)** facing prosecution from outside the prisons has been found to have a strong correlation with a **low rate of conviction** in general and the heinous crimes in particular.

6. Commissioning of well-designed **research projects** is strongly recommended to validate the informal perception that the presence of under-trial accused in the prison especially at the time the crucial prosecution witnesses are being examined in the court, very significantly enhances the probability of securing conviction in the courts.

7. The unusually **higher rate of acquittals** amounts to miscarriage of justice to either of the party to the criminal litigation, as also observed by the Honorable Supreme Court in the case of another landmark judgment in 2014 in the case of **Kishanbhai v. State of Gujrat v. Kishanbhai Etc[19]**.

8. Outcome of expedited process of court disposal shall certainly improve the relatively low proportion of **convict prisoners(30.11%)** as against the significantly higher proportion of the **undertrial prisoners(69.1%)**in the prisons. It will be a good measure to improve our undertrial convict prisoner ratio. It is certain that it will not contribute to reduction in the overcrowding in jails, which position is not worrisome even today when viewed in holistic context as discussed in preceding paras, But this approach will be creating far more problems for the prison administration departments across the country than it

will be solving if the proposed solutions are not implemented in integration with the expansion of prison capacity correspondingly.

9. **In the face of overwhelming concrete evidence, as discussed at length in the preceding paras, it should rather be concluded that** ' the relatively lower pace of expansion of prison capacity with due weightage for the total number registration of cognizable offences (51,56,172), total number of accused arrested(52,13,404), charge-sheeted in the courts(58,74,562), total accused persons convicted in one year(22,15397), total population of our country (136.6 Crores_1,364 million), as seen from its incredibly low proportion of the global average of one unit prisoner official capacity (20.71%) as seen from the status as on 31-12-2019, the current level of prison infrastructure is presenting an urgent call to their expansion commensurate with the operational requirement of well-functioning criminal justice system.' **There may be a few states where the overcrowding could be significantly higher than the national average of 118.5% but that cannot be applied uniformly to all the 28 states and eight union territories of India.**

10. Any strategy for expeditious disposal of court pendency should also factor in the **availability of valuable assets with the Bar in term of over two million qualified registered advocates** by optimum utilization of their readily available professional services.

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Technology Trends - Challenges for Policing

Pankaj Kumar Singh*

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Abstract

Technology today is changing very fast. We have gone from landline to mobile phones, from self-driving cars to autonomous cars, from 2G to 5G technology and Internet and Social media portals have brought the world closer than we could have ever imagined. All these changes in technology have brought in different issues for citizens as well as law enforcement agencies. Whereas on the one hand privacy is very important for the dignity and liberty of any individual, on the other hand the tracing of evidence in this electronic age, its credible collection, production in the court of law   and being able to convince the judiciary are things that the law enforcement is constantly being confronted with, looking at all the new technologies that are emerging so rapidly and impacting our lives like never before.

The law enforcement agencies today have to chase criminals who commit crime sitting anywhere on this planet, for whom geographical boundaries have becom history and who commit a crime in times less than nano-seconds. There are a number of technologies today, some looming on the horizon, which will pose tough questions to the law enforcement in times to come. The high standards of encryption being adopted by the industry today, the concept of machines talking to each other, the storage of data in cloud, 3D printing, artificial intelligence, block-chain, nanotechnology and dark net promise to pose serious questions to the law enforcement - starting from investigation to being able to convince the courts as per the law of the land. For successful prosecution the law enforcement will have to put all the pieces of electronic evidence together, collected from different sources and possibly different countries governed by different laws, produce it logically before the courts in a manner so that the law of the land is upheld and the guilty brought to the book – not an easy task by any standard.

Key Words: Big data , Dark Web, Artificial Intelligence, Block Chain, Cloud Computing, 3 D Printing, Internet of things, Encryption.

This article is an attempt to understand the emerging technologies, its related trends and how they are impacting our lives every day. Some of these technologies as Artificial Intelligence and Encryption have already made a big impact on our lives and the effects of these are being experienced by us each day. Artificial intelligence of Google scans our digital activities and sends us customer- specific advertisements. End-to-end encryption offered

Author's Introduction:

*   DG, BSF-Delhi.

by WhatsApp has made this platform popular among people who want to talk privately and be away from the eyes and ears of the law enforcement agencies. A huge impact of these new technologies has also been felt by the law enforcement agencies who are trying to understand the nuances of latest trends in the digital world. They are trying to understand the sequence of digital footprints left in cyberspace by these cutting edge technologies and how these can be collected by the investigating agencies and the wrong doer brought to the book. The battle does not end here. Many a time it becomes a tough job to make the judicial authorities understand the impact of these technologies and how these are being used by the criminals to compromise with systems, steal data, extract ransom, stalk victims and sell illegal products on Net – to name a few of the digital crimes being committed these days.

INTRODUCTION

Through this article an attempt has been made to discuss some of these new technologies and trends today and how they are posing issues before the law enforcement agencies today – some tractable and some intractable. The current crop of investigators is also a mix of the old and the new generation. The new generation is able to understand technology, its nuances and the digital footprints and so is better placed to solve digital crimes. This article also highlights the lack of appropriate legislation today and how it has not kept pace with the challenges that technology is posing today. Since the Internet is an international playfield, it becomes difficult to have legislations having the same effect across all the countries of the globe. In times to come the law enforcement agencies will have to learn to cooperate and help out each other - formally and informally - if we are to lay hands on the transglobal criminals and mafias who have spread their tentacles across a number of countries.

The author has discussed some of the emerging trends and technologies and how they are impacting our lives and posing serious challenges to the law enforcement people in collecting evidence from different sources in different countries, putting them in the right sequence and finally try to convince the judiciary in a simple way that the criminal needs to be prosecuted as per the law of the land.

Big data

This term was coined in early 1990s by John Mashey, working in *Silicon Graphics*, while referring to large sets of data which could not be managed or processed using traditional tools. Big data is what we are all confronted with after the proliferation of the Internet and the hugely popular Social media portals. 100 billion WhatsApp messages, 500 million Tweets, 350 million photos posted on Facebook, 95 million Instagram posts, 23 billion text messages and over 305 billion emails – this is the humongous data that we are all confronted within *ONE day*.

Big data is bound to reshape the way we live, work and think. Today almost all aspects of life are being turned into data. A complete *datafication* seems to be taking over all possible activities that we indulge in. Today companies and organizations are using all available data to make meaning out of it and help humanity understand and quantify the different aspects of our world. A large amount of information available is helping us today learn things that we could not comprehend or imagine earlier. All the emails, social media posts, tweets, phone numbers, age, sex, profession, place of work, number of friends etc can be studied to find patterns, correlations and causations for events and occurrences. The huge volumes of data spread across different platforms are

being mined effectively by the corporate to send customer-specific advertisements. This data is also sold to desirous clients for a price, thereby compromising privacy of customers, as became well known in *Cambridge Analytica* case.

The law enforcement authorities, have to virtually sweat it out to get the required *juice* from this huge data pile using keywords, strings, hash tags, geo-locations and user profiles to be able to shortlist on identity, occupation, modus- operandi etc of the wanted persons. This kind of analysis does help the law enforcement agencies to deploy resources on crime/ areas for an effective utilization of scarce resources. All this exercise is nowhere like trying to find a needle in a haystack but it is almost like trying to find a *needle in an ocean*. The amount of data that the law enforcement agencies collect in a routine manner are not collected by many other agencies. All this data if not analyzed is of no value. With computing power increasing each day and storage becoming cheaper the law enforcement authorities are using advanced analytics and algorithms to search, aggregate and cross reference data so that meaningful information emerges. There are many email and social media platforms available to all to see which can be requested by law enforcement authorities through a court order for more information as metadata, which remains hidden from regular users. The law also authorizes interception of communications over different platforms through a valid executive or a court order. With rise of technologies as IoT, Dark web, Block chain, Virtual reality etc the challenges as well as opportunities available with law enforcement authorities have increased exponentially. The huge amounts of data produced by each technology, the near absence of tools and techniques available with the current day enforcement agencies to sort, sift and pinpoint the plausible alternative are

challenges that exist. However data analytics as mapping, profiling or even predicting events are helping us appreciate the gravity of the dangers looming and thereafter help us to prepare accordingly. The big data can be used meaningfully for predictive crime mapping and creating hotspots which would be based on type of crime, date/ month of occurrence, time of event, GPS locations, the names of gang members etc. Data available publicly or obtained by court orders can also be analysed, churned and mined for patterns. All these help the law enforcement to utilise their scarce resources in a more efficient way by concentrating and supplementing their efforts in times/ locations/ seasons when the spike in crime is likely to take place rather than spread their resources evenly across all locations all the time. Machine learning algorithms used in conjunction with network analysis and data mining can help artificial intelligence throws up red flags and facilitate law enforcement agencies to come up with intelligent guesses to successfully shortlist and focus on crime and criminals.

In this entire exercise privacy is a major area of concern as all kinds of data collection involves access to information of private individuals. To circumvent the reach of the authorities and to promote privacy a number of platforms have devised high grade end-to-end encryption and have even refused to accede to the demands of the government, as was exhibited in the *San Bernardino incident* relating to FBI and Apple. However, most governments today insist on access to privately held information of individuals in the name of national security and sovereignty and wanting to detect crimes that affect society at large as can be seen in the number of suits filed by various governments against Google, Facebook, Microsoft etc relating to privacy and antitrust issues.

Dark web

The origin of the word Dark Net can be traced to the early 1970s when such networks were planned in US for security purposes, as distinct from the ARPANET which later evolved into today's Internet. This is that part of the Internet that is not accessible by normal search engines - is encrypted, anonymized and not indexed. It is because of these properties that the dark web has attracted a lot of illegal content and businesses too. However, this platform has also proved to be a safe forum for whistle-blowers and political dissidents whose ideology and thinking is against the existing dispensation in a country. Access to dark web can be made by special browsers as *Tor* network or *onion links*. It operates on peer-to-peer principle and there is a network of sophisticated encryption and anonymization methods. The dark net is also a place where most of the illegal activities take place and stolen/ hacked / illegal data is sold for a price. The dark web gained notoriety in 2013 after the said perpetrator of *Silk Road*, who provided a platform for selling illegal drugs, was arrested in US after a long time. The dark web started using *Bitcoins* for its transactions as it was encrypted, made transactions pseudonymous and perfectly suited the beneficiaries who did not want to be identified and preferred systems which made things difficult to trace. The creators of dark net and bitcoin were certainly privacy minded but not ill intentioned. However, their creations did not stop some from using this platform for illegal activities and also to get away from the prying eyes of law enforcement agencies. And it was all this anonymity and untracebility that made more companies like Silk road make forays into the dark web marketplace and take advantage of anonymity by providing a platform to deal in all things illegal – drugs, stolen credit cards, arms, ammunition, child pornography etc.

However, the anonymity offered by Dark web works very well to the advantage of whistle- blowers and hacktivists also who use this platform to share information relating to inefficiencies of a government system, corruption in departments, scams and other acts which can possibly expose the wrong doings of a government. The dark web has been used by whistle- blowers like Julian Assange, Edward Snowden etc to expose the ill deeds of the government by sharing such information in the public domain.

The law enforcement agencies find it very challenging to find vital information that is being exchanged in the dark web. All sites are encrypted, transmission and reception is through proxy servers, information is not indexed and each computer adds a layer of encryption to the message that only it can decrypt. However, it is not uncommon for officers of different law enforcement agencies to be monitoring and investigating the dark web for not only keeping abreast of the latest trends in crime but also looking for people peddling in stolen goods and selling illegal stuff. For the new generation of officers it is not too difficult a task to use this huge repository of information on crime and criminals for detecting scams, crimes which have higher gravity and which are difficult for the normal agencies to unearth. Since internet is inherently a trans-border issue, making legislation and regulations will always be challenging. There are some issues where all nations agree as pornography, child abuse etc but on a number of others as drugs, stolen credit cards, arms and ammunition etc there is not much agreement between different countries. The law enforcement agencies across different countries must therefore find ways to cooperate and evolve some basic agreeable tenets if they want to make effective use of the dark web because it is essentially a double edged weapon. It provides challenges and it also provides clues for all law enforcement to not only trace the wrong-doers but also to hold them accountable as per the

law of the land.

Artificial Intelligence

This term was coined by John McCarthy in 1956 to show that machines could exhibit intelligent behaviour. The world took notice of AI when in 1997 IBM's *Deep Blue* defeated world chess champion Garry Kasparov and then again in 2011 when Apple introduced virtual digital assistant *Siri*. AI basically implies intelligence that is demonstrated by machines. The machines are made to learn to reason, plan, perceive and process natural language by means of computer algorithms which organize vast amounts of data into meaningful results based on certain instructions and rules. Our knowledge and understanding of AI today is seen in machines that understand human speech, do filtering based on our directions, raise red flags in banks and financial institutions depending on past records and patterns, compete at the highest level in games as Chess and Go, cars that navigate autonomously and in everyday events as Alexa (Amazon), Siri (Apple) and e-commerce portals which personalise our choices and offer products, learning from our shopping experiences etc. This field of science is based on the premise that human intelligence can be so accurately described that a machine can be made to simulate it. The accuracy and correct interpretation by any machine is dependent on the quantity and quality of data, the computing power available and evolving newer ways to solve and understand problems. However AI presents umpteen challenges too. The transparency in evolving algorithms without any corporate, social, ethnic or technical bias is a must. Any algorithm will be only as good as the data being fed. There have been reports about algorithms operating with racially biased data which totally subverts the end results, as has been brought out in *Coded Bias* - a 2020 Hollywood film. Accountability for flawed and

biased algorithms is also an issue – whether the programmers or the users are to be held liable. The French have however set an example by declaring that all the algorithms used by the government agencies will be publicly available.

The law enforcement agencies have been using AI for predictive policing for some time now. Detection of online threats, identifying indecent images on Net, detecting unhealthy trends on Social media, identifying stolen vehicles by cameras, recognizing known criminals by facial recognition are only some of the examples. With the huge amount of data being generated through cameras, video, social media, internet etc it is only AI that can detect crimes that would otherwise go undetected in the ocean of data and this will ensure greater public safety and increased public confidence in the criminal justice system. A number of cities in India are using facial recognition in the huge network of CCTV cameras to identify and track down known criminals. The same technology is also being used in the body-worn cameras by connecting them to the database of criminals and suspects. Suspicious behaviour of persons in public places are also picked up by AI for a detailed scrutiny before a conclusion is drawn. A Huge amounts of crime data available with police for many years is being used to identify hot spots of crime or study its fluctuations in time and place. Similarly traffic related accidents and death data, studied over a period of time, have clearly revealed patterns that are predictable over time, place and month of the year. All these patterns are red-flagged by the AI embedded in the systems so as to forewarn the agencies that resources as manpower and equipment can be utilised more productively if these trends are noticed and action taken well in time.

However, the law enforcement departments

will be confronted with investigation relating to AI and it is then that they will have to look at the transparency aspect of the algorithms, whether at all there is any bias embedded into it – by oversight or by design, whether the data forming the basis of the algorithms is reliable and credible, ethical aspects associated with algorithms and whether any safety or security aspects are involved. All this will mean that the investigation team must have computer experts, software programmers, psychologists, legal eagles and many more.

Block chain

This ingenious invention was first introduced in 2009 by a person or a group of persons by the pseudonym Satoshi Nakamoto. He introduced the first peer-to-peer cryptocurrency – Bitcoin – with no intermediaries or any central authority. Blockchain implies an electronic ledger that is shared across many users. Each of its transactions creates a record that is time stamped and cannot be altered and all these records are linked to their previous one. The validation of these transactions is free and there is no central authority. The three sterling properties of any blockchain are decentralisation, transparency and immutability.

There is total *decentralization* in the system as there is no central authority and the information available is open to all to see. All information held on a blockchain is shared across all persons and this gets continuously updated on the entire database. This implies that everyone in the network owns all the information. There are no intermediaries and so the transaction costs are zero. Thus this technology threatens all well-known intermediaries today as Amazon, Uber, AirBnB, Banks and financial institutions – all of whom charge a certain processing fee for all transactions made on these platforms. Blockchain gives a user

transparency as well as complete privacy. Although a person is identified by his public address yet his real identity is concealed by a complex cryptography architecture. Thus his real identity is secure yet everyone can identify the transactions made by him by his public address. The third good quality about this concept is *immutability* or the inability to tamper with records once they have been entered. This is seen as a great asset for banks and financial institutions to check on frauds and embezzlements. Each transaction generates a hash value which is a string of numbers and letters. The cryptographic hash algorithm gives a fixed length to an input string of any length and this makes the output standardised and secure. Even a small change made in the input is reflected in a big way in the hash function. This is called the *Avalanche effect,* as this small change affects each block and gets known to all users in the blockchain. All records in a blockchain are permanent, placed chronologically and these are available to all other nodes. Since the database is not stored in any single location, hence it becomes difficult for a hacker to corrupt or hack the entire database. Since the nodes are spread throughout the world so capturing the entire network by hacking becomes virtually impossible as this would require a computer with enormous computing power.

Banks and financial houses are experimenting with blockchains for ensuring secure tamper proof transactions. Critical infrastructure management is also venturing in this domain to ensure that data comes from authentic sources only. Academic credentials and other kind of property related documents can be authenticated using blockchain and made tamper proof and credible. Stock trading can also become more reliable if the chain of ownership becomes authentic. Since government working involves a lot of paper- based processes they can incorporate

blockchain to minimize fraud and increase accountability and credibility in the system. All human resource based agencies can use blockchain to ensure correct background checks, past postings and date of birth issues – all of which are amenable to frauds. Publishing, Music industry, Pension programmes, Medical industry, Transportation, Accounting, e-Commerce etc are other areas which have started using blockchain to usher in more transparency, accountability and credibility in their systems.

The law enforcement will be confronted with each of the above mentioned sectors to detect cases of fraud and embezzlement. In the investigation process block chain can provide that extra layer of security and integrity to preserve the chain of evidence which becomes so very critical for prosecution to prove its case in courts. The law enforcement departments will also have to come up with solutions which will red-flag any violations noticed in public records that are using blockchain. The requirement will therefore be of systems and software experts who understand block chain and its intricacies.

Cloud computing

This term was introduced by Eric Schmidt in 2006 at a search engine conference at San Jose, California. This concept makes available *ubiquitous 24x7 access* to a shared pool of resources with minimal interference from any intermediary. The cloud model comprises on-demand service, network access, resources available and a measurable service. The services provided can also be of varied types

– software as a service, platform as a service or the infrastructure as a service. Today most of the people are beginning to store their personal data in the cloud as different from storing it on their PCs till some years ago. This architecture

offers a number of benefits as economies of scale, reliability, scalability and all time accessibility. Files in the cloud are constantly updated, moved to different locations and their back up kept in different locations. Cloud computing distributed architecture permits data to be stored, processed and distributed over several data centres and numerous machines

– all of which could be spread across different geographical locations and jurisdictions across the globe. There is complete decentralization of data centres, data logs and the physical location. The cloud service provider usually never informs the client about the location of his data storage and so the person who owns data has no clue about the actual location of this data. The cloud customer is also not able to collect network logs because the cloud architecture works under the control of the service provider. The service providers try and host their servers in countries which offer cheap data storage and have strict regulations regarding security, disclosure and privacy.

When the law enforcement is faced with investigation of data stored in the cloud, the different locations/ countries make it difficult for them to obtain data about crime/ criminal activities because of different laws in different countries. The physical access to the servers, where the data is stored, is also at times technically not possible due to the remote locations of the servers in different countries. All this is in addition to the different operating systems, varied file formats, ever growing data size and the humungous storage devices that each investigating agency is confronted with during such digital investigations. Criminals these days are storing all kinds of

incriminating data in such cloud servers which are spread in different countries and have strict laws regarding privacy and disclosure. A search warrant issued by one country may not have the same validity in another country. Trying to get a valid legal authorisation from courts for search or seizure in another country may give the suspects or criminals ample time to modify, corrupt or even destroy the incriminating data which takes a few seconds only. The main issue before the law enforcement is to collect data from different locations, governed by different legislations, connect them in a credible chain of evidence, ensure their proper custody and then try to convince prosecution and judiciary about the case. The lax response of the service provider and at times his ability to change/ corrupt the data in connivance with the criminals, when both are under investigation, are also issues that the investigator will be confronted with. Thus timely data acquisition is the biggest issue. The soundness of evidence, chain of custody and the admissibility of available evidence in the court of law will always be important factors in any investigation. Though tedious, time taking and difficult, yet the data retrieved from cloud sources could virtually be a goldmine of possible evidence for modern day forensic investigators. Therefore, some kind of a common understanding needs to emerge between the law enforcement agencies all over the world to make timely information available to the law enforcement agency on lines of *Budapest Convention 2004*, also known as the *Convention on Cybercrime of the Council of Europe*, which serves as a guideline on international cooperation between countries which are signatories to this treaty. Only such measures can ensure that neither certain service providers nor some geographical locations become safe havens for unscrupulous elements.

3D printing

This concept came into being when Charles Hull invented *Stereolithography* in 1984. Patent related issues, however came in the way and not many people had been able to use or explore this technology for a long time. Once the patents expired, this technology became available to people and with the rapid expansion of Internet this technology has reached places, it was never imagined. This technology basically implies manufacturing identical products using digital designs using product- specific printers. 3D printing has simplified manufacturing and it has democratised production by letting anyone produce goods in a do-it-yourself manner. The entry barrier in any field seems to have been broken. It has cut short the supply and the distribution chain because people are now manufacturing products with the help of computer-aided- designs which are openly available on the Internet- either for free or for a price. These products are also customized to suit the specific needs of the user. The rapid spread of internet and the availability of all kinds of sophisticated designs available in open source has given a boost to 3D printing which has found good use in design industry, healthcare, prosthetics, construction, weapons, automobiles etc.

The law enforcement was forced to sit up and take notice when Cody Wilson of US made a functional plastic gun in 2013 using 3D printing and thereafter posted the blueprint on the internet which was downloaded over 1,00,000 times. People have now produced accessories to different firearms sitting in the cosy comfort of their homes. It should not be surprising if people start making guns and other firearms resembling everyday items using 3D technique to escape the eyes of the enforcement agencies and the law. Criminals have CT scanned different kinds of locks

and thereafter produced master keys using this to gain access to secure and protected areas. In Europe some have produced fake ATM facades to clone the data from the card users and thereafter used it to defraud card owners. Availability of digital designs on the open internet or the Dark net has created the possibility of huge amounts of fake branded products in the market. Although counterfeit goods are available even today but the easy availability of 3D printers would mean the production of such counterfeit goods on a large scale is possible in a decentralised manner by regularly shifting the place pf production. In not too distant a future, we may even be confronted with 3D printed illegal drugs, human organs or even weapons of destruction.

The law enforcement agencies are also using this technology to their advantage by reconstructing the scene of crime, producing robotic arms for bomb disposal etc. This technology can be used to re-construct the scene of crime and to logically and pictorially explain the sequence of events to the courts for better appreciation and understanding. 3D scans of mutilated and disfigured bodies can lead to a better understanding of how the crime could have been committed and to explain the bullet marks, bodily injuries and better understand the sequence of events. How the law enforcement can prevent crooked minds from making illegal weapons, counterfeit goods, illegal drugs etc is something only time will tell. IP infringement will be a major issue that will need to be tackled. Legislation as *Undetectable Firearms Act* of the US will have to be thought of. But even when such illegal acts are found out, the tough job will be to trace the origin of the crime, the creator of the design and how he made it available to other perpetrators - who may have either committed the crime or were into preparation or making an attempt at it. Tough questions will arise

regarding accountability as who is to be held liable – owner of the 3D printer, manufacturer of the printer, person who supplied the raw material to make the product or the person who committed the crime. Accountability for crime will take a completely new dimension. Rather than supplying illegal weapons, narcotic drugs etc to fellow criminals the smart criminal will now merely supply the digital designs to fellow criminals who in the privacy of their homes will be able to produce illegal weapons/ drugs. The evidence will have to be collected from the original and other related digital printers, relate it to the products developed, tag it to the crime planned/ attempted/ committed and thereafter by applying appropriate legislation produce them before the court as per the law of the land. However, criminal minds will always challenge the enforcement agencies by coming up with softwares as *Disarming Corruptor* which can use algorithms to conceal blueprints and bypass filters when they are posted on the internet.

Internet of things

This term was coined by Kevin Ashton in 1999 when he was working on a project and wanted his management to look into this exciting technology. This idea had existed since 1970s when it was referred to as *embedded internet*. However today IoT is referred to as a network of devices that are connected to each other, talk to each other and share data based on algorithms over Wi-Fi/ Internet. It is estimated that today over 26 billion devices are connected to each other all over the world. The main sectors where this technology can be seen are smart cities, industrial devices, health related wearables, security gadgets, home appliances etc. Today we are seeing an implosion of IoT devices like Fitbits, smart cars, smart watches, mobile phones, virtual assistants, smart home appliances, CCTV cameras etc. This technology is spreading very rapidly and is

expected to see exponential growth once the Internet moves from 4G to 5G. With hundreds of devices connected to each other, the crime scene of tomorrow will virtually be the Internet of things.

The challenge before the law enforcing departments will be to quickly gather all related digital data and find out the digital presence/ absence of suspects and their accomplices and thereafter link the crime to the criminal. As the digital footprints at any crime scene increases so does the ability to collect, interpret and filter information using sensors, cloud infrastructure, advanced analytics and different algorithms. However, as the race to connect more and more devices goes up, the manufacturers could possibly become lax in ensuring strict security protocols and this is when these devices will become targets for hackers who can gain access to different networks and then either corrupt, compromise, disable them or seek ransom amounts for making them normal once again. Privacy of data and the requirement of law enforcement authorities of the same set of data for investigation will be ticklish issues that will have to be sorted out by appropriate legislations.

The enforcement agencies in India are already familiar with this technology. The tracking of errant drivers on the road using smart cameras which after recognising the registration number of the car, compares it with the *Vaahan* database and thereafter sends the traffic challan to the centralised database as well as on the mobile number of the car owner using the *Sarathi* database. Body cameras transmit data to the central server to look for known criminals as well record transactional events for record. Drones and other surveillance devices also transmit data to a remote location where this data is collated, filtered and meaningful data is retained for use. The challenge for law enforcement agency at any crime scene

will now be to understand the number of devices that are connected to each other, the evidence present in each device, collect all such digital evidence, ensure correctness in the chain of evidence and finally produce it in the court of law. Thereafter, the prosecution and the judiciary also needs to be convinced of the credibility of evidence collected and the veracity of the digital evidence collected from different devices before a criminal can be prosecuted. Remote access in this technology also enables devices from across the borders to talk to each other which might involve collecting evidence from a different country which will imply different laws, mutual treaties and international relations – an extremely time taking task. Tackling encrypted data across IoT devices can also pose issues during investigation. However, using more and more digital footprints to track down the criminals can only help in understanding the trends in crime, save time and money for organisations, increase the confidence of public in enforcement agencies and finally assist the courts by producing incontrovertible digital evidence before the courts. Faster analytical and scientific responses from the investigative agencies will improve the reaction time and give quality output which can act as a deterrent for the wrong doers and tackle problems before they assume epidemic proportions. IoT is therefore a double edged sword – though it opens up many windows for the wrong doer to compromise on systems, the opportunities available to the law enforcement departments also increase manifold and this clearly outweighs the downside that exists in this game.

Encryption

This word has its origin in the Greek word *kryptos* meaning hidden and *graphein* means to write**.** This technology scrambles data in a manner so that it becomes unreadable to

intermediaries and to all those for whom it is not intended. The objective of this technique is to jumble up data that is being sent so that it appears like garbage to one who is not authorized to see it. There are many technologies to encrypt data and these come in many forms with the key size and strength being the basic differences. Encryption is essentially of two types – Asymmetric and Symmetric. The Asymmetric encryption uses two different keys – public and private – to encrypt and decrypt data or message. RSA (*Rivest- Shamir- Aldeman, names of scientists*) is the most popular example of this category. Symmetric encryption involves only one key called the secret key which is used to encrypt and decrypt data. Examples of this technique are Triple DES (*Data Encryption Standard*), Blowfish, Twofish, AES (*Advanced Encryption Standard*) – each of which differs from the other in terms of individual keys and bit length. These are known for their speed and overall effectiveness and are used by e-commerce and secure payment platforms. In fact AES is the algorithm most trusted by the US government. It is a very secure platform because it uses 128, 192 or 256 bit key for encryption and decryption. With even a 128 bit key the possible values come to 2^{128} which makes it virtually impossible for even the fastest supercomputer to crack the code in a foreseeable time domain. Since the computational requirements of this algorithm are low, AES is popularly used on all laptops and smart phones which support Android, iOS, Windows etc. This encryption can be seen on popular applications as WhatsApp, Signal, Telegram, WinZip etc.

With cyber-attacks becoming an everyday affair, security specialists are ever busy trying to evolve newer techniques to keep data safe. Whether it is email, stored data or chat, some kind of encryption is required to safeguard the integrity of data. Data of 533 million users of Face book from over 100 countries was hacked and was available for sale in early April 2021. Similarly data of over 500 million users of LinkedIn was also up for sale in second week of April 2021. India does not have a very robust data-protection regime and the *Personal Data Protection Bill 2019,* presently under scrutiny of the Joint Parliamentary Committee is a step in the right direction. This Bill seeks to apply Data protection regime to both the government and private entities and emphasises data security and data privacy. Meanwhile, the government of India has introduced *Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021* which has come into force on 26th May 2021. These rules mandate that the platforms and publishers will have to inform I&B Ministry about what they publish, nature of content and size of subscriber base within 30 days of notification of these Rules. Social media platforms will also have to reveal the *first originator* of a post in response to a court order or a request of law enforcement within 72 hours in the interests of sovereignty and integrity of country or other specified grave crimes apart from appointing a resident Compliance officer, Grievance officer and a nodal contact person.

With the fast pace at which IoT is expanding the cybercriminals will get that many more ways to gain access to systems and data. Each not-too-secure device will provide a window on the unscrupulous elements to get into unsecured systems and compromise data. But, as can be seen from above examples, even the strategy to *encrypt everything* is not working. The idea should be to have maximum *Integrity in the system*. How to safeguard the encryption keys and the digital certificates is the key. Snowden compromised the credentials of his administrators at NSA who had access to encrypted data and he used this to gain access to highly classified data which he later revealed to the world. Similarly data of Lockheed Martin

was also compromised, not because the encryption was cracked, but because the RSA SecurID tokens were stolen.

Though privacy is a good thing for the common man, this technology is also being actively used by criminals, anti-national elements and immoral people who want to secretly talk about their plans, conclude deals and set rendezvous points for delivery of illegal goods - all away from the prying eyes and ears of law enforcement agencies. The most common example today is the extensive use of WhatsApp with its end-to-end encryption which is almost impossible to crack. There are also a number of email services as Lavabit, Hushmail, Protonmail etc which are end-to-end encrypted which espouse the cause of civil liberty activists and promise complete digital privacy and zero access to email/ data of clients. Even those empowered under the law, are unable to decode them. These are causing serious problems for the law enforcement authorities today. Even ex

President of US Barack Obama said "*you can't have 100% security, 100% privacy and zero inconvenience*".

Conclusion

With the pace at which India is galloping in the Digital age, it is imperative that the law enforcement agencies all over the country understand and appreciate the technology trends today, train their manpower to face the challenges, associate experts from various fields to understand the nuances of each technology and also educate the prosecution and the judicial system if some tangible results are to be seen, else it will be a case of the left hand not knowing what the right hand is doing. It is only when a synergy develops between the different systems that the people will develop confidence in the law enforcement agencies and they will be a step ahead of the criminals and bring them to the book diligently and professionally.

Electronic Evidence in Crime Investigation - Darknet & Policing

Pawan Kumar Shrivastava*

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Abstract

The proliferation of criminals who have exploited the anonymity and secrecy offered by the darknet and crypto currencies have created a major challenge to controlling and preventing of cybercrime committed across the world. Traditional police functioning needs reform to break the darknet's veil of encryption. Legal, Institutional and procedural changes are also required along with technological advancements for effective law enforcement.

The article discusses cyber forensic investigations and strategies to acquire, preserve and analyse the electronic evidence in investigation of cybercrime and to use it in the court of law. We will explore the issues and challenges faced by law enforcement agencies to acquire electronic evidence in crimes committed on in darknet. Tools and techniques like bitcoin forensics, network forensics, hacking and using covert policing for investigation and successful prosecution of criminals operating on the dark web and the legal framework in which they can be deployed are also covered in the article. A case study on Indian Railways is also presented.

Key Words: Darknet, Electronic Evidence, ICT, Cybercrime, Crypto Currencies, Deep Web, Cyber Forensic Investigations, Cyber Law.

INTRODUCTION

We are living in an era of digital revolution affecting every aspect of human activity. Such a digital transformation marks a complete transition in our society and affects many facets of our lives. It can achieve shared progress, simplify our lives and make information available at the finger tips.[1]

While we all can recognize and appreciate the powerful advantages, it has a dark side as well. The Internet, computer networks, and automated data systems present an enormous new opportunity to commit a crime and then hide under the blanket provided by the internet.[2]Today, virtually every crime has a digital component and electronic technology being used to facilitate the criminal activity. Therefore, surveillance and investigation for electronic evidence becomes a key factor in prevention and detection of crime.

Dark net has further complicated the nature and factors involved in modern day crime having vast repercussions often crossing political boundaries. It is hidden from most internet users and accessible only to those who seek to indulge in buying and selling of illegal

Author's Introduction:

*   Divisional Security Commissioner/RPF-Rajkot Division/Western Railway, Rajkot, Gujarat.

goods ranging from missiles to stolen data of innocent users, terrorist funding to drugs, human trafficking to child pornography, crypto currencies to hawala networks taking the anonymous identity. Therefore, enforcement agencies find it difficult to trace these criminals operating in cyber space.[3]

ELECTRONIC EVIDENCE IN POLICING

In today's digital world when every person or crime leaves a digital trail behind, investigative bodies can use electronic evidence and cyber forensics to prove the crime because no matter how hard the accused try to erase their trails, the digital footprints can never be fully eliminated or erased. These trails can act as crucial evidence to aid law enforcement agencies.

SIX PHASES OF ELECTRONIC EVIDENCE

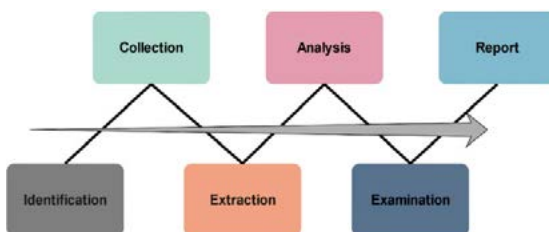In digital forensics, there are six forensic investigation phases to handle and manage the electronic evidence.[4]

Fig.1 SIX Phases of Digital forensic investigation Process[5]

1. **Identification**: In this phase, electronic evidence is identified to prove or disprove the crime. It can be done using advanced forensic tools and techniques like Network Monitoring, Open-Source Intelligence (OSINT), Cyber-Decoys etc.

2. **Collection:** This phase concerns a collection of evidence from crime scene keeping admissibility of evidence in mind.

3. **Extraction:** In this phase, data is recovered from compromised devices such as hard disk, mobile phone e-mail, cyber space etc. Data acquisition, cloning, imaging and carving are some of the techniques used for data extraction.

4. **Analysis:** This phase deals with evaluation, interpretation and correlation of electronic evidence to prove or disprove the crime.

5. **Examination***:* Electronic evidence and its features are examined for reporting to the court.

6. **Report***:* In the final phase, investigator summarizes the findings appropriate enough for successful prosecution.

ELECTRONIC EVIDENCE – INDIAN PRESPECTIVE

Electronic evidence is defined as information and data of value to an investigation that is stored on, received or transmitted by an Electronic device.[6]

Section 3 of the Indian Evidence Act, 1872 (Evidence Act) defines "Evidence". Evidence means and includes all documents including electronic records produced for the inspection of the court. Such documents are called documentary evidence.[7]

According to Section 2(1)(t) of the IT Act 2020 (IT Act), "Electronic record" means data, record or data generated, image or sound stored, received or sent in an electronic form or micro film or computer-generated micro fiche. Further, section 4 provides legal recognition to electronic records.[8]

Section 65B(1) of Evidence Act deals with the admissibility of electronic evidence and it says that any information contained in an electronic record which is printed on a paper, stored, recorded or copied in optical or magnetic media produced by a computer shall be

deemed to be also a document, subject to certain conditions mentioned in section 65B(2). [7]The electronic evidence should essentially satisfy the following conditions-

1. It should be produced by a computer which has been used regularly to store or process information for the purposes of any activities regularly carried on over that period by the person having lawful control over the use of the computer;

2. The information derived in the electronic record, was regularly fed into the computer in the ordinary course of activities

3. The computer was operating properly

4. The duplicate copy must be a reproduction of the original electronic record.

Therefore, a certificate under 65B is required to ensure integrity, genuineness and authenticity of the electronic record.

In Harpal Singh[2016] & Anvar P V[2014]case, Supreme Court stated that electronic records are not admissible without 65B certificate. This judgement was overruled in Shafhi Mohammad[2018] case making 65B certificate not mandatory for electronic evidence to be judicially admissible.

Recently, in 2020, Supreme Court clarified that no certificate will be required to produce electronic evidence such as disks, pen drives etc. if the original device can be produced in the court. Further, it ruled that authenticity of the electronic evidence can be proved in the witness box with production of the originator of the electronic evidence. However, certificate will be required if evidence is stored in a network or on server which cannot be produced in the court.[9]

CHALLENGES OF ELECTRONIC EVIDENCE

Electronic evidence is very fragile and can easily be altered, damaged or destroyed by improper handling or examination. For this reason, special precautions are to be taken to identify, collect, preserve and examine it.

With the increased use of cloud computing, virtual computers and VPS etc. where data is stored on 'server farms' located in another jurisdiction may create legal issues. The interlinking of devices with dynamic sharing of resources and continuous exchange of data, create issues while collecting and preserving the electronic evidence. Extraction of relevant evidence without data destruction is extremely complex.

The reliability of tools and technologies that extract data and evidence from crime scene may also be questionable at times. Chain of custody is complex as fragile electronic evidence can easily be altered due to negligent handling.

Authentication of open-source information like social media, networking sites presents its own unique set of issues and challenges to be produced as evidence.

Digital forensics is the domain of experts. In developing countries like India, law enforcement agencies at the ground level are often not aware about processes, tools and technologies required to collect, analyze and document electronic evidence.Failure to follow due procedure may lead to loss of integrity of evidence.

Another challenge is certification required for validation and admission of electronic evidence in court proceedings. In India, there has been ambiguity regarding requirement of certification of electronic evidence under 65B of Evidence Act.

Darknet has added another dimension into complexity of electronic evidence. Much of the electronic evidence is derived from the cyber decoys, undercover cyber agents, hacking and other means which are not acceptable as legal means for collection of evidence. It is challenging to promote certainty and admissibility of these electronic records in the court of law.

DEEPWEB& DARKNET

Only about 4% of the World Wide Web (www) content is visible and it can be found using search engines like Google, Yahoo etc. Whereas, 96% of content is known as invisible web or deep web consisting of a wide network of sites which are hidden and not indexed by search engines.[10]
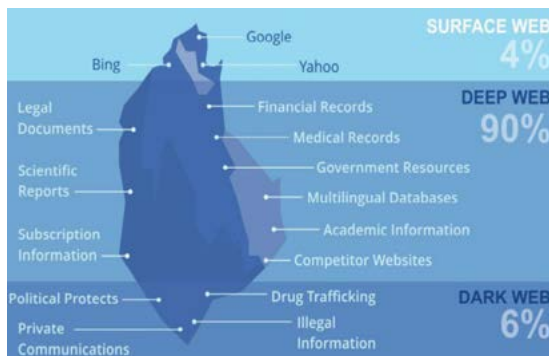
Fig.2. DeepWeb and Darknet[11]

Most of the hidden content on the deep web is generally clean and safe. It is kept hidden from the open web to protect information and user privacy. Such as -

1. Government Records

2. Email and social media accounts

3. Private organization records

4. Medical records & Academic Information

5. Financial, Scientific & Legal records

   Further, Darknet is just a small fraction of larger deep web, which contains secret websites that is not indexed, encrypted and used to promote criminal activities like–

1. Organized trafficking of drugs, antiques, wildlife & human being

2. Selling of data collected from users

3. Money laundering & Hawala

4. Terror Activities etc.

FEATURES OF DARKNET

Darknet is based on a few core features that provide a high degree of anonymous access to internet services:[12]

1. **No Webpage Indexing** within the darknet.

2. **Virtual Secret Tunnels** via randomized network for anonymity.

3. **Inaccessible by conventional browsers** due to its unique registry operator.

4. **Hidden by network security** features like firewalls and encryption.

5. **Decentralized network** prevents surveillance and investigation.

FUNCTIONING OF DARKNET

There are several ways to access the Darknet. TOR(The Onion Routing) is the most popular virtual network that allows anonymous access to services on the darknet.[13]

Fig.1. How TOR connect to Darknet[14]

TOR network uses onion routing for encryption and transmission of data through a series of randomly selected nodes (servers) called onion routers. Each node decrypts only one layer of the message to direct message to next node. Therefore, Target computer receives the incoming traffic coming from the last output node of the TOR network. This pre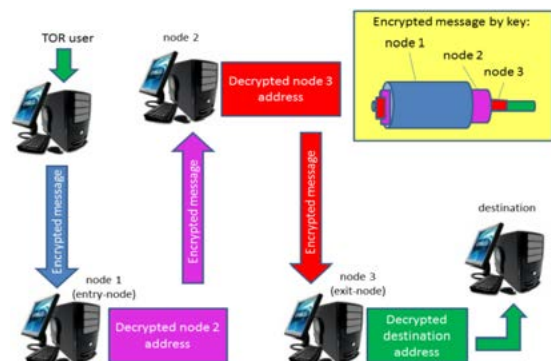vents the disclosure of intermediary nodes, the origin, the recipient of data traffic and the content of the message.[14]

CRYPTOCURRENCIES AND DARKNET

Virtual crypto currencies like Bitcoins, Ethereum (ETH), Litecoin (LTC) etc. are used as digital equivalent of cash in digital black market. The illicit sale of drugs, firearms and explosives; human trafficking; money laundering; terrorist activities and cybercrime are all facilitated by virtual crypto currencies in the darknet.[15]

Online darknet marketplace Silk Road was a website used for selling drugs, weapons, hiring contract killers etc until it was shut down by U.S. government in 2013. The site's users paid using bitcoin in encrypted network to protect the identities of the users.[16]

CHALLENGE OF POLICING THE DARKNET

The first step to identify a suspect online is to trace the Internet Protocol (IP) address. This is not possible when an individual accesses the site through a dark web browser like TOR, I2P or Freenet. However, Law enforcement agencies have now developed &deployed a wide range of different techniques to identify, arrest and convict criminals operating in darknet.[17]

Across the world, countries have set up dedicated agencies for policing the darknet. In 2018 Europol created its own dedicated darkweb team.[18]and the USA created the

Joint Criminal Opioid Darknet Enforcement Team known as J-Code.[19] India also come up with cyber security policy 2020 with a plan to set up a dedicated team within NTRO (National Technical Research Organisation) for darknet.

One of the most commonly used policing techniques in all cyber investigations, including darknet is the use of Open-Source Intelligence (OSINT). It is the data and information collected legally from open and publicly available resources usually left through human error.[20]

Cybercriminals always try to mask their real identity and create new identity in cyber space in order to attract potential criminal collaborators and 'customers'. Creation of new identity always leaves some digital footprints in cyber space. For example –The Silk Road, one of the largest darknet marketplaces for drugs, was taken down as a result of OSINT. Silk Road was advertised on a bitcoin forum using a personally identifiable email address. This was used for arrest and prosecution of Ross Ulbricht known by the pseudonym Dread Pirate Roberts in the United States.[21]Recently, Narcotics Control Bureau of India also used the OSINT to identify & make India's first darknet crime arrest, involved in shipping of psychotropic drug parcels abroad in the garb of medicines.[22]

Despite the usage of crypto currencies to trade illegal goods and services on the darknet, it is still possible to track buyers and sellers by examining the pattern of transactions. For example - Burchard, using the moniker "Caliconnect" was a major narcotics vendor on darknet, who was identified based on analysis of bitcoin transactions.[23]

Apart from following suspicious transactions, leads generated from arrests and interceptions of illegal packages can be used to identify the network. Further, no matter how sophisticated encryption tools are adopted by criminals

dealing in physical goods, such as drugs or guns, require some kind of delivery system. These delivery channels can be targeted for tracking.[20]

Online undercover cyber agents can also provide crucial intelligence. Infiltration of online forums, closed groups can be used covertly for controlled surveillance operation to collect crucial evidence.

Also, Darknet Forensic Tools & Techniques can be utilized for surveillance and investigation purposes.[24]

Table1: Darknet Forensic Techniques [Ref- D. Rathod, "Darknet forensics," future, vol.11, p.12,00202017]			
Category	**Techniques**	**Tools**	**Purpose**
TOR Forensic	RAM Forensic	1 Belkasoft RAM Capturer to dump the live RAM 2 Hexdump to view hexadecimal of RAM dump.	Analysis of file types, web history and downloaded content
	Registry Forensic	RegRipper	Analysis about TOR installation, last executed date and other attributes
	Network Forensic	1 Wireshark 2 Network Miner 3 Fiddler	Data & Network Traffic Analysis
	Database Forensic	TOR Database viewer	Evidence related to users or visited web content
Bitcoin Forensic	Bitcoin wallets Analysis	Internet Evidence Finder	Evidences related to Bitcoin address, Bitcoin block chain

Despite the usage of various tools and techniques, law enforcement agencies can only observe dark web users committing crimes but can't identify them for further investigation without hacking into their devices.[25]Hacking can be used to deploy malware for targeted surveillance, gather intelligence, DDoS attack on server, destroying the data and taking other measures to impact the criminal network adversely.

Modern day crime has blurred the lines between intelligence agencies and policing in power and responsibility. Cyber policing needs to build capacity, develop technical abilities on continuous basis on par with intelligence agencies to handle crimes committed on the Darknet. There is also a need for inter-agency and international collaboration for research, sharing of best practices and capacity building to stay ahead of criminals operating in darknet.

Government of India has also taken legislative, technical and institutional measures to address the issue of policing the darknet. Some of these are Enactment of IT Act, Establishment of National Cyber Coordination Centre, Indian Computer Emergency Response Team (CERT-In) for advisory and quick response in cyber security incidents, National Critical Information Infrastructure Protection Centre (NCIIPC) to protect critical information infrastructure, Cyber Swachhta Kendra to ensure security from malware and botnets and signing of

Memorandum of Understanding (MoU) with overseas agencies and governments for information exchange and collaboration.[26]

ELECTRONIC EVIDENCE & DARKNET

It is complex and difficult to obtain electronic evidence from the darknet following all the legal aspects to ensure its admissibility in the court of law. Investigators also face technical-challenges to establish digital evidence obtained from the darknet. Most users of the darknet are tracked in foreign countries. It's also a roadblock to investigation and prosecution.

The use of hacking tools may create legal and jurisdictional issues when applying for a search warrant, where the location of the device to be searched is unknown. In 2016, an amendment to Federal Rule of Criminal Procedure of USA allowed remote access warrant to be issued by U.S. federal court in such cases.[20]

In UK, Investigatory Powers Act 2016 has formalised the use of hacking techniques and equipment interference warrants to ensure greater transparency and oversight to obtain data from devices by interfering with the targeted electronic device.[27]

In Netherlands also, if a device is identified in cross border jurisdiction, law enforcement authorities are required to send a request for legal assistance to the country where the server is located. If the country does not respond to such request, then the Dutch police may be authorized to hack the server. Digital evidence obtained is admissible in court of law.[28]

It is suggested that, in line with legislative amendments made in other countries, Indian penal code, criminal procedure code, Indian Evidence Act and other special laws like IT Act should be amended to clarify the use of hacking tools, cyber surveillance, cyber decoy, code of conduct and powers law enforcement agencies can use during online covert operations. In addition, issues of warrant for remote search and seizer of devices in unknown locations and admissibility of electronic evidence obtained from it should also be addressed.

CASE STUDY OF INDIAN RAILWAYS

Rare Mango software was being used by organized interstate gang for booking Indian Railway tickets in bulk illegally. This gang bypassed the advanced security features of IRCTC website and automated the whole booking procedure using RareMango software to work as a parallel railway ticket booking network to earn illegal money.

Software owner and criminals in the gang adopted bitcoin account, fake KYC wallets, hawala transactions and money transfer portals to hide their identity and to avoid detection. Usage of VPS and virtual computers, Virtual mobile numbers and VOIP (Voice Over Internet Protocol) and WhatsApp/Telegram groups to communicate secretly made the detection of the white-collar criminals very difficult.

Cyber surveillance and usage of OSINT proved fruitful to find the missing linkages. During forensic analysis of digital devices seized from one of the accused, RareMango software setup was found in which developers accidently mentioned email ID. Social media analysis and open-source intelligence were collected to trace the company named Raylon Tech Pvt. Ltd. and its owners. But their whereabouts and real identity were still unknown.

Subsequently, cyber decoy was planned & infiltration in telegram and WhatsApp groups was done for surveillance and investigation of the case. In depth analysis of website was done and cyber security tools and investigation techniques were adopted to hack the highly secured RareMango server to collect the whole data about the organized network of criminals

and their activities.

Data collected from the server revealed the identity of master mind and over 2000 criminals involved in illegal business of railway tickets. Raids were conducted all over India to arrest the criminals. Total 994 criminals were apprehended with seizure of railway tickets worth Rs 87.70 lacs in these raids across the country.

CONCLUSION

Information and cyber security are the key to future resilient systems and organizations. Cyber Security Policy 2020 rightly recognizes the need for advanced technologies for cyber security and policing the darknet to pre-empt crimes.

In order to effectively tackle the threats posed by cybercrime specially the darknet, it is important to bring legislative, institutional and procedural changes, institutionalize mechanism for sharing of vital information and enhancing analytical and technical capabilities of agencies to operate in unknown locations and obtain electronic evidence from it. Further, adopting proactive approach to intervening in contingencies, developing a robust breach notification system to intimate cyber-attack and acknowledgement of successful tactics and procedures through the common forum is also important.

International and interagency cooperation and coordination is a must for action across jurisdictional borders, anywhere in the world, with clearly defined provisions and techniques to govern the authorized controlled operations to deal with the emerging threat of borderless crime in the darknet era.

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Drishti: A Low-Cost Video-Conferencing Platform for District Policing

Ashish Tiwari, IPS[1]
Nipun Agarwal, IPS[2]
Adarsh Singh[3]

Abstract

Policing all over the world is a profession in which the police personnel has to respond quickly to the emergency within hours or even within minutes. For this, the police need to have devices for quick means of communication. We have been using the technology of radio wireless communication for a long time. They have been helpful in such emergencies. But this radio wireless communication technique has not proved to be very robust and very effective when we need to conduct a meeting without actually wanting the staff to come face to face. As a solution to this, Ayodhya police envisaged project Drishti in which the officers could conduct crime meetings and performance review meetings over video-conferencing. It had two advantages over wireless communication. Firstly, unlike a radio wireless set, it provides two-way simultaneous communication. In radio communication, only one person can speak at a time and the recipient of the voice message can't reply unless the speaker on the other side is done with his message. Secondly, in video-conferencing, a person is visible as well as audible. Therefore, it becomes better to judge his body language and his responses over video conferencing and offers a better medium to conduct crime meetings/performance review meetings.

We propose to solve the age-old system of meeting/training/ public grievance leading to wastage of man-hours, fuel, finance. For this, Ayodhya police deployed an ultra-low-cost video conferencing system 'DRISHTI' connecting all 18 police stations, 6 circle offices, 3 additional SP offices, Superintendent of Police office for regular crime meetings, performance review meetings, training, and capacity building,and public grievance redressal.

Going ahead with this project, we set up 30 video-conferencing terminals. Started using it in January 2020 for district Ayodhya, the Drishti initiative ensured various benefits to the Ayodhya police organization. A few of them which can be cited are as following: saving of the public exchequer's money, citizen's access to the officers was eased, saving of the traveling time, saving of the fuel expenditure, being environmentally friendly and it had psychological implications as well. Further, it had helped provide the online training along with ensuring transparency and accountability. Drishti platform proved to be a boon during the corona crisis and it had helped in ensuring administrative efficiency along with maintaining social distancing.

Keywords: Video-conferencing, public exchequer, citizen's perspective, organizational efficiency, fuel expenditure, capacity building, transparency and accountability, corona pandemic, police response vehicles.

Author's Introduction:

1   Superintendent of Police, Ayodhya.
2   ASP, Ayodhya.
3   IIIT Jabalpur.

Introduction

In today's digital era, the world is changing quickly and the administration and policing have to keep pace with it. The districts in India have the great geographical extent, thereby making the physical communication time taking and fuel consuming. Traveling during traffic congestion is often physically exhausting and drains mental energy. This gets reflected in the diminished productivity. Ayodhya police were searching for a solution to fixing this problem. The technology of video-conferencing was being widely used in the private sector but it wasn't exploited by the government's police department yet. Lately at the international level, we have seen video conferencing getting increasing acceptance from police [1], we see this phenomenon accelerating during Covid-19 in Indian police

[2] as well. But, the lack of a low-cost effective solution is preventing the mass implementation across the nation. Hence, Ayodhya police wanted to test the feasibility of such a low-cost initiative and then study its outcomes.

Problem Statement and solution

We propose to solve the age-old system of meeting/training/ public grievance leading to wastage of man-hours, fuel, finance (Fig. 1). For this, Ayodhya police deployed an ultra-low-cost video conferencing system 'DRISHTI' connecting all 18 police stations, 6 circle offices, 3 additional superintendents of police offices, office of the superintendent of police for regular crime meetings, performance review meetings, training, and capacity building and public grievance redressal.

Ayodhya is a large district of 2764 sq. km. in which physical communication is difficult.

FOR OFFICERS	• Frequent road travel is exhausting and diminishes the productivity. • Demoralizing as police had to depend on civil administration (SDM/ADM) for VC.
FOR CITIZENS	• Time consuming and expensive to travel long distances.
FOR ORGANIZATION	• Resource wastage in physical communication. • Many administrative process esp. review meetings, technical training done more frequently, more efficiently & at a larger scale .

Fig.1 – Problems of various stakeholders before DRISHTI low-cost VC solution.

Salient Features of the solution

The system is a low-cost (about 2 lacs INR) video conferencing (VC) solution connecting all police stations and offices based on a webcam, mike, and mobile 4G data dongle. It uses the existing computers available with the police department for VC. Anytime anywhere 24x7 video meeting can happen

with field officials on their mobile phones as well. It has increased efficiency, economy, and effectiveness by saving man, material, and finance. The applications are in the area of public service grievance, performance meetings, crime meetings, training, and capacity building. It required only one day of in-situ training to train the policemen at the

district. The solution paid rich dividends during corona time where physical meetings were avoided using Drishti VC. It also connected the headquarter directly with the field for eg.Additional Director General of Police (ADG) 112 held a meeting with all constables in the field posted on the emergency vehicle system.

Challenges during Implementation

There were multiple financial, technical, and capacity-building challenges during the implementation of the project (Fig. 2). The first and foremost requirement in initiating this project was the estimation of the number of offices to be connected through static video-conferencing terminals. For this, we calculated the average number of representatives attending the crime meetings/performance review meetings. Thus we zeroed in on the Superintendent of Police's office's connectivity with the 18 police stations in the district, the 6 circle officers' offices, 3offices of the Additional SPs, Reader's office, Account's section, Head Clerk section, Fire Services, Radio wireless communication unit, and the police lines. Thus in total, we estimated 30 static conferencing terminals to be set up.

FINANCIAL CONSTRAINTS	BANDWIDTH CONSTRAINTS	CAPACITY CONSTRAINTS
• Conventional VC for 30 terminals costs approx. 45 Lacs	• Conventional VC relies on dedicated fibre broadband line	• The end users need to be trained to use it properly

Fig.2 – Various constraints/challenges faced during implementation of DRISHTI VC project.

The next challenge to realize this project was the financial burden the department will have to bear. As such, the department has a scarcity of funds and we did not have the luxury to set up a standard video-conferencing terminal which costs about INR 45 Lakhs. Therefore, we did cost-cutting in purchasing the hardware equipment for the same. The existing computer hardware which was being used for the CCTNS network in the state was

simultaneously used. Their monitor was used as the console. Purchases of web-cameras, microphones, USB speakers were made on a need basis where these hardware features weren't available in the CCTNS desktops/laptops. Driver updates of a few motherboards were done to suit their compatibility.

The other main challenge was that of broadband connectivity. Connecting all the designated VC terminals with the broadband required a dedicated optical fiber network to be laid down which was cost heavy and required the government's sanction. To cater to this problem, unlocked 4G sim-card internet devices were procured. The remotely located police stations got signals with varying strengths from different telecom service provide INR Hence, unlocked internet devices were purchased so that the remote police offices had the laxity to use the SIM card which suits them the best in terms of signal strength.

Fig.3 – Types of equipment procured to implement low-cost VC solution

After fulfilling the hardware requirements and the connectivity issues (Fig.3), we required a software platform to support this network of video communication. After the exhaustive market survey and reading online reviews we decided to use the Zoom [3] meeting cum chatting web application which cost us INR12,000 per year for a licensed version of 100 use INR

Further, we leveraged the technical know-how of the newly recruited CCTNS operator. Thus, we didn't have to meet additional expenditure on the training of the police station staff. These CCTNS operators were made the master trainers and their expertise was utilized to train the beat level constabulary.

Finally, all this paraphernalia cost us INR 2 Lakhs for setting up 30 terminals vis-à-vis a conventional video-conferencing set-up

costing a whopping 45 Lakhs.

Standard Operating Procedure (SOP)

A district smart cell was made at the Superintendent of Police office manned by a constable to coordinate and start the video conferencing. A district-wise Whats App group of policemen was used to disseminate the information. Training videos were also made and circulate to these groups.

We now see different perspectives of stakeholders as different use cases.

If we look from the *citizens' perspective,* they could now directly interact with the Superintendent of Police, Circle officer, and Station House Officer (SHO) over this platform of VC (Fig. 4). It was otherwise time-consuming and expensive for them to travel to the head-quarters to get their grievances redressed. A police-station wise roster is formed and a time-slot is allotted for the *Jan-sunwai* during which the Superintendent of Police comes face-to-face virtually with the citizens residing in remote locations.

Fig. 4 SHO doing jan-sunwai for public grievance redressal with Superintendent of Police using VC

The *police personnel* benefitted from this initiative the most. We started to conduct the crime meetings, performance appraisal meetings of the station house officers (SHOs) through Drishti platform (Fig. 5). The system of VC was put in place in January and has been running successfully for 3 months now.

Fig. 5- Superintendent of Police doing crime meeting with police personnel.

Results

The project proved very beneficial to all its stakeholders in a great sense. These various aspects can be dealt as under:

The *average distance* which an SHO used to travel to attend a meeting at the Superintendent of Police's office has been tabulated below. If we project the travel distance saved *annually* then the use of Drishti platform would save approximately *66,720 km of travel distance annually(Fig 6)*.

Financial Implications

Firstly, to the *public exchequer*, the cost involved in the project was mitigated to INR 2 Lakhs over the exorbitant INR 45 Lakhs which is required to set up a conventional VC. The

saved money could be utilized in other areas of public priority.
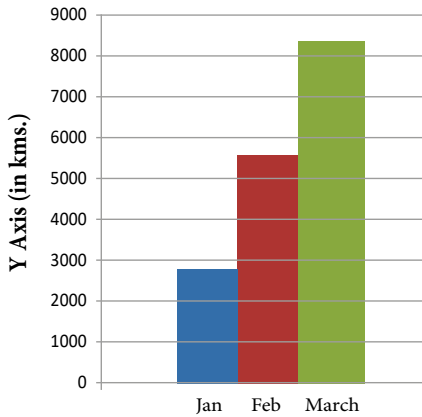
Y Axis : Average distance travelled by all the SHOs/ officers cumulatively for crime meeting in a month =
(To and fro distance from the SSP office) x (No. of crime meetings held in the particular month)

Month	No. of meetings held	Total travel distance saved (in kms.)
January	*2*	*2780*
February	*4*	*5560*
March	*6*	*8340*

In the month of January, the 'Drishti' VC system was being used only by the SSP office but in the months of February and March, the offices of Addl. SPs and the offices of Dy. SPs also started to use it frequently.

Name of thana/police office	Distance from SSP Office
Patanga	59
Mawai	62
Kotwali Rudauli	45
Haiderganj	55
Tarun	35
Kotwali Bikapur	27
Raunahi	18
Maharajganj	26
Gosaiganj	31
Inayat nagar	36
Khandasa	58
Kumarganj	38
Kotwali Ayodhya	15
Ram Janm Bhumi	14
Purakalandar	16
Kotwali City	3
Cantt.	2
Mahila Thana	1
Co Rudauli Office	42
Co Bikapur Office	30
Co Mikipur Office	39
Co Ayodhya Office	14
Co City Office	1
Co Sadar Office	1
Addl. SP City Office	7
Addl. SPRA Office	1
Addl. SP Security Office	16
SSP READER Office	1
Account section/Head clerk	1
Reserve Inspector Office	1
Total distance	**695**

To and from distance from SSP office = 695x2=1390

Fig 6: *Average distance saved by an SHO/officer for crime meeting in a month*

An estimation of the *corresponding time* the SHOs used to take in traveling the above-mentioned distance is shown as under.(Fig 7)
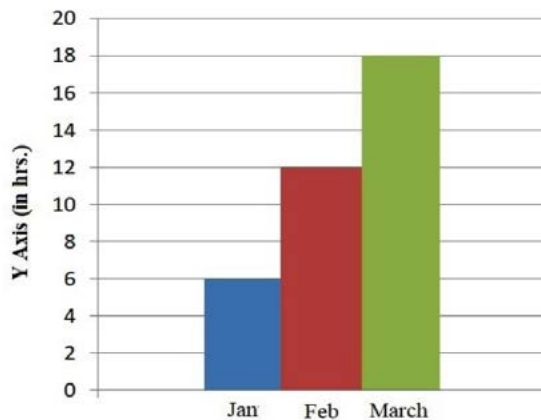
Y Axis : *Average time saved by one SHO to travel to the SSP office for crime meeting in a month =* (Average time saved by 1 SHO to travel to the SSP office for 1 crime meeting) x (No. of crime meetings held in the particular month)

The maximum time saved by an SHO in commutation is 3 hrs.

Month	No. of meetings held	Total time saved(in hrs.)
January	2	6
February	4	12
March	6	18

In the month of January, the 'Drishti' VC system was being used only by the SSP office but in the months of February and March, the offices of Addl. SPs and the offices of Dy. SPs also started to use it frequently.

Fig 7: Average time saved by one SHO to travel to the Superintendent of Police office for meetings in one month

Traveling such long distances was time-consuming and used to diminish productivity. Further, if we factor in the salary of an inspector rank officer who draws a salary of Rs 70,000 per month then *Rs 3.35 Lakhs worth human labor* is saved annually which was otherwise being wasted just on physical commutation.

From the *organizational's efficiency* point of view, we have optimized it by decreasing fuel expenditure. It formed a major part of the expenditure. Let us first look at the fuel saved and then the corresponding fuel expenditure saved. (Fig 8)
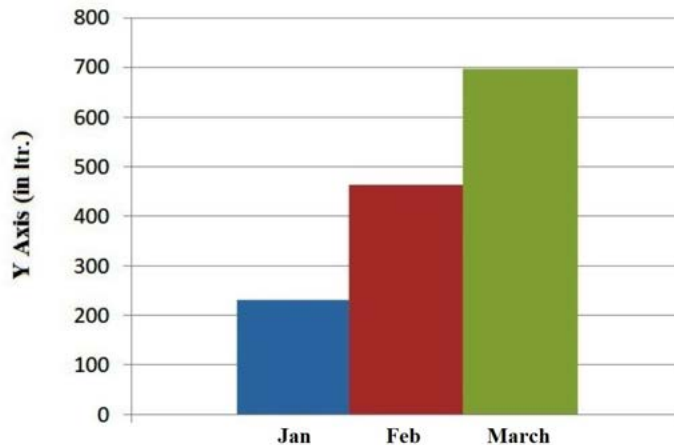
Y Axis : Average fuel saved by all the SHOs/ officers in commuting for 1 crime meeting = (To and fro distance from the SSP office) / (Mileage of the police 4- wheeler vehicle)

* *To and fro distance from the SSP office = 1390 kms.*
* *Mileage of the police 4- wheeler vehicle = 12 km/ltr.*

Month	No. of meetings held	Total fuel saved(in ltr.)
January	2	232
February	4	464
March	6	696

In the month of January, the 'Drishti' VC system was being used only by the SSP office but in the months of February and March, the offices of Addl. SPs and the offices of Dy. SPs also started to use it frequently.

Fig 8: Average fuel saved by all the SHOs in commuting for one crime meeting

The fuel expenditure saved due to the above-mentioned saving of fuel is represented in the graph below. (Fig 9)
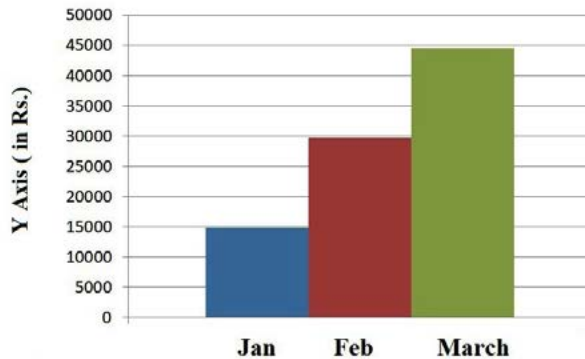
Y Axis : Average fuel expenditure saved by all the SHOs / officers in commuting for 1 crime meeting = (Total fuel exhausted in travelling to and fro from SSP office) x (Cost of fuel per ltr.)

* Total fuel exhausted in travelling to and fro from SSP office = 116 ltr
* Cost of fuel per ltr. = 64 Rs/ ltr (diesel)

Month	No. of meetings held	Total fuel saved(in Rs.)
January	2	14848
February	4	29696
March	6	44544

In the month of January, the 'Drishti' VC system was being used only by the SSP office but in the months of February and March, the offices of Addl. SPs and the offices of Dy. SPs also started to use it frequently.

Fig 9: Average fuel expenditure saved by all the SHOs in commuting for one crime meeting

Environmental and Psychological implication

Environmentally speaking, the decrease in fuel exhaust has benefitted the planet, saving it from vehicular pollution. Even the global conventions and the Government of India call for minimizing the use of fossil fuels as far as possible.

If we look at *the psychological aspect*, it was a morale booster for the police family. Also, it is psychologically traumatizing to travel such vast distances to attend a meeting. Now it was very comforting as they could attend the VC from their police stations themselves.

Capacity building implication

Using the Drishti platform,we have made the process of *capacity building* digital (Fig 10). Now, the technical training, demonstrations, and knowledge sharing are done over the virtual classrooms. It was not practically feasible to impart training in brick and mortar classrooms to all the staff. The *resource persons* are often present in a different district or maybe in a different state altogether. If at all, they are available in the same district, they may not be free to deliver online lectures at a particular time. Hence, their training videos could be recorded and broadcasted later on.

Fig 10- Capacity building using Drishti VC

Transparency and *accountability* are the new buzz-words in the administration. Through the Drishti platform, both these civil services' values can be ensured. The *jan-sunwai* can be broadcasted live over social media thus making the entire process transparent. It would also fix the responsibility of the concerned officer who would be listening to their grievances as he will have to redress them in a time-bound manner. Later on, feedback shall be taken from the Superintendent of Police's offices to know whether the citizen felt satisfied or not.

At the level of the police staff, every crime meeting conducted over the VC would be recorded. Since this recording would be accessible to all the police personnel, they may refer to the directions given by the Superintendent of Police again later on to refurbish their memory. Since every VC is digitally recorded, they will not be able to ignore the compliance of the directions given to them by the Superintendent of Police. Therefore, it fixes the responsibility of the subordinates.

Implications on policing during Corona Times

We started to use Drishti platform in January

itself but it turned out to be most useful during the *Corona Crisis*. It helped in maintaining physical *distancing* to its best. Daily review and compliance report of the lockdown were taken from all the SHOs and the gazetted officers by the Superintendent of Police.

A virtual face to face interaction helped with better administration of the situation. Further, many corona suspects were quarantined at the district hospital. They needed to be interrogated for their contact tracing. Now, the doctors at the hospital were not professionally sound in interrogation techniques and had to maintain social distance with the quarantined patient at the same time. Hence, we had set up a Drishti VC terminal at the district hospital and our SWAT team interrogated them over the VC and successfully traced several contacts.

During this time of *Corona pandemic*, the *police response vehicles (POLICE RESPONSE VEHICLEs)* of*UP Dial 112* served as the first responders – whether it is the call for breach of quarantine norms or the information by a neighbour regarding a corona suspect. These POLICE RESPONSE VEHICLES even delivered ration to the needy calleINRIn this backdrop,

Additional Director General, Dial UP 112, Lucknow wanted to directly interact with the personnel manning these POLICE RESPONSE VEHICLES in Ayodhya. We realized this interaction through the Drishti VC platform wherein all the POLICE RESPONSE VEHICLE staff was asked to download the *Zoom meeting-cum-chatting* mobile application. They were trained in a workshop as to how they should use this mobile application. All these POLICE RESPONSE VEHICLES' staff participated in the VC from their vehicles themselves which were parked in remote rural locations in Ayodhya. The interaction turned out to be very useful as they briefed the Additional Director General of Police (ADG), UP dial about the personal protection kits, face masks, sanitizers, gloves, and ration kits they had been provided with to attend a POLICE RESPONSE VEHICLE event. Additional Director General of Police (ADG) Dial UP 112 also shared the Standard Operating Procedure (SoP) regarding attending a Corona related event.(Fig 11)

Fig. 11 – Additional Director General of Police (ADG) UP 112 doing VC directly with policemen at district in emergency response vehicles.

Conclusion

Ayodhya police have been successfully using the Drishti platform since January 2020. Drishti has brought about a sea change in the Ayodhya police organization. It has made the government process digital. The projected annual savings using this platform is estimated to be 66,720 km. of travel distance per year and a saving of 5568 liters of fuel worth INR 3.56 lakhs annually. Further INR 3.35 lac worth of human labor is saved which was otherwise being wasted annually just in physical commutation. Therefore, Drishti has been successful in improving administrative efficiency and citizen services at an ultra-low cost.

However, the best results of this technology could be realized only when this project is emulated in the entire state of Uttar Pradesh/India and all the police stations across the state/nation get connected digitally.

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Tackling Sexual Violence in Public Places in Cities

HOW POLICE CAN BRING ABOUT A PARADIGM SHIFT FROM PROCESS-CENTRIC TO VICITM-CENTRIC FUNCTIONING BY LEVERAGING THE FULL POTENTIAL OF CCTNS

Alankrita Singh*

Abstract

Sexual Violence against women and children in public places has emerged as a global pandemic. It poses a Strategic Leadership Question before the Police Organisation. The paper proposes that CCTNS can be leveraged to bring about a paradigm shift from process-centric functioning to victim-centric functioning and from reactive response to pro-active response by police in such cases. The proposed roadmap involves stepping into the shoes of a victim, leveraging technology and collaboration with other stakeholders including the women and girls navigating a city. The proposed solution empowers women, gives them an agency and makes them partners of Police in improving security scenario- both real and perceived.

Key Words

Strategic Leadership Question, Sexual Violence in public places, Rights based approach, Victim-centric functioning, Victim Participation in Investigation, Victimology, Empathetic understanding, Paradigm-shift, Police Reforms, Predictive Policing, Data-analytics, Leveraging Technology, Preventive Policing, Community Policing. Women empowerment, Practical Gender Needs and Strategic Gender Needs.

INTRODUCTION

The Female Labour Force Participation (FLFP) has been consistently declining in India in the past three decades despite the nation being on a growth trajectory in this duration.[1] This has attracted attention of academicians, scholars and international organisations[2], who have attempted to decipher the reasons behind this phenomenon.

A lot has been written and discussed about the social structural inequalities in the Indian society being the underlying root cause for the downward trend in FLFP. On the other hand, lack of basic infrastructure like safe... last-mile public transport options and safe and accessible public spaces[3] have also been documented as important reasons for the same.

According to 'Safe Cities Global Initiative' of the UN Women,[4] Sexual Harassment in Public

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Author's Introduction:

*   Dy. Director, LBS National Academy of Administration, Mussoorie.

TESTIMONIAL

"I was a 13 year-old-school girl. I used to cycle to my school. As I stood waiting at a traffic signal, a bike stopped beside me. A hand suddenly reached out to my leD breast and squeezed it hard. Shocked I turned to look. The huge grin on that face and the pride in those eyes- I have not forgotten in 25 years.

Neither have I overcome the feeling of pain, disgust, shame, frustration, anger and helplessness."

(Author's personal experience)

Image 1: A girl student on the streets of Mumbai (Picture Courtesy : Author).
Box 1: Testimonial

Spaces is an under recognised global pandemic. To quote from their report, "In New Delhi, a baseline study conducted in 2012 reveals that 92 per cent of women experienced some form of sexual violence in public spaces in their lifetime, and 88 per cent of women experienced some form of visual and verbal sexual harassment (unwelcome comments of a sexual nature, whistling, leering or making obscene gestures) in their lifetime."

Roads (50%) and Public Transport (39%) are listed as most unsafe Public Spaces, which are followed by markets (22%) and spaces where women wait for public transport (12%).[5]

"Safety, or the lack of it, has concrete consequences on the lives of people. For instance...harassment of girls in their neighbourhoods, on the way to school, and on buses leads to their dropping out of school... curtail(ing) the movement of women in the city, their work and their education – their complete participation in city life [Andrew 2000; Moser 2004; Whitzman 2002b]."[6]

From my own personal experiences, one of them penned down in testimonial above, I can say that actual experiences of sexual harassment are on the one hand and on the other is the perpetual fear of harassment lurking in one's mind. The fear severely

constraints women's mobility and hence life choices.

Secondly, women are conditioned to feel shame and trauma, making it difficult for them to share incidents of sexual harassment and abuse, even with close friends and family members. Consequently, they suffer silently and in solitude which may cause severe harm for their physical and psychological health, both in short and long term.

Third, and most important for the purpose of this concept note, is that such instances do not get formally reported. It is inconvenient, stigmatic and intimidating for a victim to approach a police station due to socio-psychological factors and the apprehension of victim blaming and inaction by police.[7] There are no easily accessible, quick, simple and welcoming mechanisms for reporting.

The women who commute to work or to school/college, may need to report incidents on a daily basis. Despite all these being cognizable offences, expecting young girls and women to go to a police station everyday and to register one or more FIRs every week and to be witnesses in trials of all those cases for the next few years or decades, is probably expecting the improbable.

The consequence of non-reporting is that,

the victims remain deprived of medical, psychological and legal counselling and support services which could enable them to cope better and empower them to stand up for their rights.

On the other hand, the crucial data and information regarding hotspots, timing and frequency of such offences remains off the police radar. The offences are missing from police statistics and records, hence no police action, policy or resources are dedicated to prevention of these offences and relief and redressal for the victims.

From the perspective of offenders, they are not reported, not caught and not punished. This leads to low deterrence and impunity. Offenders may then be emboldened to commit more heinous offences like rape and murder.

Whether the Police Organisation would prioritise the safety and security of women; to unleash their economic, social and political potential; to enable them to be a part of the urban growth story of India, is a **Strategic Leadership Question before the Police Organisation***. Technology is predictably a key tool to bring about transformation. Though, technology is merely a means to certain ends which can be achieved only through organisational commitment to them.*

SETTING THE CONTEXT

IN THE NEWS...

in the aftermath of rape and dousing of a veterinary doctor in Hyderabad,...three policemen have also been suspended for failing to act quickly when the woman's disappearance was registered by her family on Wednesday, with the officers instead suggesting she had just gone off with a man and turning the family away from the police station.

(https://www.theguardian.com/world/2019/dec/01/protests-indiawoman-gang-raped-burned-todeath-hyderabad)

Poor reporting of offences[8] due to structural social inequalities and constraints on one hand and abysmally poor conviction rates[9] on the other plague the government's efforts at combatting violence against women in general and in public places in particular. According to the National Crime Record Bureau (NCRB) data, 3,38,954 cases of crimes against women were registered in 2016, including 38,947 cases of rape. Going by the NCRB state-wise data, of all rape cases for trial in 2016, 25.5 per cent resulted in conviction.[10] The conviction rate stood at 29.4 percent in 2015.

This is despite the country having adequate legal provisions to tackle the same. To fulfil India's obligations under International Agreements like CEDAW, UNCRC and the MDGs and due to increasing awareness and demand from the grassroots, several legislations for tackling violence against women and children have been enacted in the past 2-3 decades. There have also been minor and major amendments to the IPC and the CrPC. The Criminal Law Amendment Act of 2013, for the first time ever, criminalised all forms of sexual violence in public spaces that are euphemistically termed as 'eve-teasing'.

These legislations may be powerful instruments, their implementation remains a challenge, particularly for the Police.[11]

Police in India is centuries old institution with its processes and procedures governed by the provisions of IPC, CrPC and the Evidence Act. There is also the prevalence of a strong sub-culture which often mirrors the biases and prejudices of society in general.

According to the 'Status of Policing in India Report 2019'[12], nearly one in five police personnel is of the opinion that gender-based violence complaints are false and motivated to a great extent. And according to India Justice Report 2019[13], on average there are only 151 police personnel for a population of one lakh

and only 7% of the total of 2.4 million police personnel in the country are women.

Even as Police reforms need to be taken up at various levels including institutional reforms, improving people to police ratio, upgrading training of police personnel, depoliticisation of police functions and modernisation of police processes and procedures.

Even as safety and security of women in public places is contingent on an overall hauling of the entire criminal justice system including prisons, prosecution, judiciary and medicine.

Even as Police is one component of the criminal justice system, though an important one, in being the first responders and having a critical role in prevention of offences.

Despite the systemic and long term issues, Police can play vital role in making cities safer for women by devising specific prevention and proactive strategies, by providing access to quick, welcoming and easy reporting mechanisms, by leveraging technology and by collaborating with civil society and other government agencies.

PARADIGM SHIFT FROM PROCESS-CENTRIC TO VICTIM-CENTRIC FUNCTIONING

Processes for all police functions are laid down in the CrPC. There are prescribed formats for registering an FIR and conducting investigation. The penultimate objective for all this standardisation is delivery of justice. For delivery of justice, the continued support of the victim to the prosecution case is of utmost importance. Hence the need for a paradigm shift in approach, from process-centric to victim-centric at each and every step and possibility of an interaction with the victim.

Reporting of offences is the first step. This is where the police and the victims, both lose out most as most offences are not reported and those which are reported are not all recorded.

Recording of cognizable offences is not only a constitutional responsibility of the Police, it is also an effective tool for prevention and prohibition of offences by the Police.

Hence, there are two significant issues here.

One, to reach out to those complainants who do not report offences for various reasons.

Two, to record each and every offence that is reported and actively seek victim's faith and confidence all though the investigation and trial.

It is proposed that both these aspects pertaining to reporting and recording of offences can be addressed by making all police processes victim-centric, such that are convenient and accessible to the victim and keep her in the centre.

What happens when after a victim chooses to register an offence of sexual violence?

As documented by Pratiksha Baxi in her book[14] on Rape Trials in India, a victim of sexual offences experiences victim shaming, stigma and trauma. By registering an FIR, she stands up against not just the offender, but against a societal mindset and against a deeply entrenched system. The victim is likely to face threats and further harassment at the hands of her own family, friends and family of accused, informal social structures like panchayats and even formal systems like the criminal justice system.

Despite sexual offences being non-compoundable, acquittals on the ground of 'compromise' are very common. The apex court[15] in india has time and again held that such compromises are a travesty of justice and victims need to be protected and supported to enlist their commitment to the prosecution over the course of the trial including appeals.

With a paradigm shift from process-centric functioning to victim-centric functioning, the Police could bring the victim in the centre of all

processes associated with investigation and trial. Additionally, Police may play a leadership role in bringing together all such services and schemes which would restore a victim's faith and empower her to fight her case.

PARADIGM SHIFT FROM REACTIVE TO PROACTIVE RESPONSE

The 2012 gang rape of Delhi as well as the 2019 veterinary doctor rape case of Hyderabad served to highlight the fact that Police response to sexual violence in cities has remained confined to being reactive rather than pro-active.

Proactive tackling of sexual violence on streets is a complex issue requiring longterm and sustained engagement with multiple stakeholders particularly the women navigating a city.

However, there have been some efforts in different states like the 1090 Power Angels of Uttar Pradesh[16], the She-Teams of Andhra Pradesh[17], Scooter Patrols by Women Police Officers of Jaipur[18], just to name a few. But these have rather been city specific, piecemeal and have had the limitation of being officer or personality driven. Yet other initiatives like 'Anti-Romeo Squads' have even been questioned for their methods, intent and legality[19].

On the other hand, with increasing access to internet and mobile phones[20], particularly in cities, certain mobile App based safety solutions have emerged in specific cities in India. The most prominent examples are '*Safetipin*' and '*Safecity*' with comprehensive presence in New Delhi[21]. Ministry of Home Affairs and certain state governments and Police Commissionerates have also launched safety apps for women with an emergency alarm linked to the nearest Police Control Room.

The popular safety apps are repositories of dynamic crowd sourced data. Using advanced analytics, the data can provide valuable inputs regarding nature, broad trends, patterns, MO, spatial and temporal spread of offences against women in public places. This can guide simple decisions like location of PCR vans and patrolling routes and timings on the one hand and long term security planning decisions on the other.

These developments present a unique opportunity for the Police to collaborate with civil society partners, subject experts, other government agencies and most importantly, with the victims and prospective victims of sexual violence in public places. The collaboration could be a means to bring about a paradigm shift from Reactive Approach to Proactive Approach.

A ROADMAP TO BRING ABOUT THE PARADIGM SHIFTS- THE 3 PILLARS

To achieve paradigm shifts from process centric to victim centric functioning and from reactive to proactive response, a roadmap based on the following three pillars is proposed.
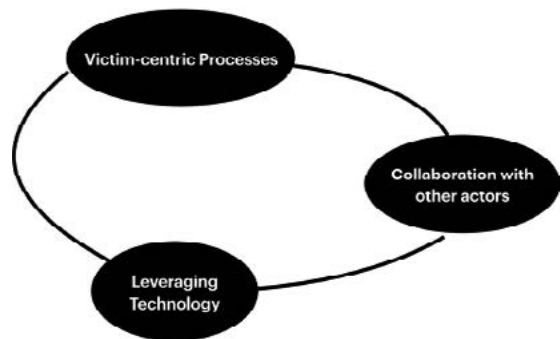
Illustration 1: Three pillars of a road map to bring about paradigm shift from process-centric to victim-centric and reactive to proactive functioning

The first pillar of the Roadmap is **step into the shoes of a victim**, *to feel where it hurts and to do something to minimise the pain so that she stands tall on her feet and walks comfortably and confidently.* This can be done by bringing victim-centrism in all processes and procedures. This can be done by putting

oneself into the shoes of a victim[22]. To understand her perceptions, insecurities and past experiences and utilise this understanding for making police processes victim-centric.

According to the victim's standpoint, the victim must be free to take decisions and to exercise choices. Whether or not she would like to report an incident of Sexual Harassment; if yes, then at what time; how and to whom. The crucial role that the police can play is to provide her with these choices and provide access to important services, knowledge and information according to the choices made by her. This has the potential of empowering each of the women in question by providing them the agency to take decisions regarding their own safety.

*The second pillar is to **leverage technology***. Given the high penetration of mobile communications and 4G network in cities, simple mobile technologies, google map, crowdsourced data and data analytics can be employed for reaching out to the maximum number of women, receiving their feedback registering complaints or FIRs online. Technology is indeed the means of achieving victim-centrism in police processes.

*The third pillar is to **collaborate*** and engage in meaningful networking with Civil society, subject experts, municipal bodies, state level departments of social justice, health department, SLSA/ DLSA, Child Welfare Committees, one-stop-centers of MWCD and the women themselves. No organisation can resolve this humongous and complex issue in isolation, though they can collaborate and complement each other's unique strengths.

A COLLABORATIVE VICTIM-CENTRIC MODEL FOR PREVENTION AND PROHIBITION OF SEXUAL VIOLENCE IN PUBLIC PLACES

I.   INTERVENTION AT THE STAGE OF REPORTING

Stepping into the shoes of a victim

If the author were a woman walking on the streets or commuting using public transport, when faced with sexual harassment on a daily basis, would she reach out to a stranger? Probably, yes. But only if she sees value for herself in doing so.

Would she be interacting with kind and empathetic people? What would her experience be like?

Would she get good quality counselling on how to take care of herself. Would this in any way lead to reduced harassment in future and would this lead to any action against those who commit these offences.

Would her name and details remain anonymous or would she get phone calls from reporters, family of the accused and police. Would police come to her house and make it known to the world that something has happened with her.

If she is hurt physically and/or emotionally, would she receive care and support from professionals? What if she might need time before she is able to share or to speak about it. Would she be judged if she reported late? Does she need to go to the Police Station?

What will happen after she report the incident? What follows an FIR? What happens in a medical examination? What happens in courts?

And so on...

Box 2: A template for stepping into the shoes of a victim

Incorporating the three pillars of the road map for bringing about paradigm shift from Process- centric to Victim-centric Functioning and from Reactive to Proactive Response, a model intervention at the stage of reporting and to tackle non-reporting has been designed as follows.

It is proposed that a private/civil society partner[23] with sufficient experience and expertise of working in the area of women's and girl's safety be engaged for the purpose. The partner would design, develop and operationalise a mobile application based platform that integrates maps, blogging, social media and backward-forward linkages with the Police Control Room and Police Stations. The services to be provided from this platform would be mutually agreed between the partners.

The following is a sample interface which

includes suggestions about various services that may be provided through the mobile App.

1. The first and the most prominent feature is the EMERGENCY/DIAL 100 button that provides direct access to the Police Control Room or Dial 100 Control Room. This is for occasions when an app user finds herself in an emergency situation. On the right hand side, links to social media accounts in the name of the App have been prominently placed.

2. The link 'What is Sexual Harassment in Public Places' provides definitions, simple explanations and illustrations of the terms easily intelligible to young and elderly as well as to less literate or to visually or auditorily challenged. It would also provide formal and legal definitions, prescribed punishments and case laws.

Illustration 2: A collaborative victim-centric model for prevention and prohibition of sexual violence in public places

3. The link 'What Can I do' lists out the choices or options available to women and girls along with the ways and means to access the same. In this sample

the services as explained in points are available on the mobile app itself. Others that may be available outside the App are also to be listed.

4. 'Share with us in anonymity' is envisaged as a telephone call based service where women and girls can call and share incidents that occurred recently or in past. The idea is to share with an empathetic adult who listens with empathy and understanding and walks the victim through the options available to her.

5. 'Seek Psychological Counselling' is envisaged as a phone call or web based professional psychological counselling services. And 'Seek Legal Counselling' is envisaged as a phone call or web based professional legal counselling services. These may be provided free of change with support to the private partner coming from relevant government schemes of the Social Justice Department or the SLSA/DLSA.

6. 'Help us identify hotspots/peak hours' aims to build crowdsourced data which would be useful as inputs in policy making, security planning and designing interventions.

7. 'Write a Testimonial' provides opportunity to share incidents anonymously to facilitate coming out and legitimate venting of anger and frustration. This would also alert other women and girls and provide them an opportunity to network with each other.

8. 'Write a blog' provides an opportunity to share knowledge and experience on the subject of sexual harassment and effective tackling of the same at the level of a person, family, community and state.

9. In 'Share your suggestions', the app users could provide useful very specific and pin-pointed suggestions directly to the authorities concerned authorities like the Municipal Bodies, Commissioner of Police, Health department etc.

10. Through 'Register FIR', the App users can directly register lodge an FIR regarding an incident of Sexual Harassment that may have happened with them.

The data generated through the app would be superimposed on the Police Control Room data and simple data analytics can be employed for drawing conclusions and interpretations.

A professionally run mobile App providing the above services is expected to bridge the gap between victims and the legal system. It is likely to provide access to essential services to millions without requiring them to go to a police station. And most importantly, it is likely to enhance the percentage of FIR registration in the cases of Sexual Harassment in public places.

II. INTERVENTION AFTER THE REGISTRATION OF FIR- AT THE STAGES OF INVESTIGATION AND TRIAL

The Crime and Criminal Tracking Network and Systems (CCTNS) project was initiated by the Ministry of Home Affairs, GoI in 2009. The CCTNS project seeks to digitise police records and in the second phase, integrate the Police data with other pillars of the criminal justice system namely- Courts, Prisons, Prosecution, Forensics and Finger Prints into a unified Integrated Criminal Justice System (ICJS).[24]

The stated objectives of CCTNS are-

1. Achieve computerisation of Police Processes (FIRs, Investigations, Challans)

2. Provide pan India search on National database of Crime and Criminal records

3. Generate Crime and Criminal reports at State and Center

4. Provide Citizen Centric Police Services via a web portal

5. Sharing of Crime and Criminal data among Police Stations, Courts, Prisons, Forensics and Prosecution for more effective justice delivery.

As of November 2015, only 78% of the police stations are entering 100% FIRs through the CCTNS software. Progress of migration of investigative processes from paper to CCTNS is even slower and skewed state-wise.[25]

The progress of implementation of CCTNS[26] is slow and its potential of internal reforms pertaining to effective monitoring and supervision of investigation is yet to be unleashed. This concept note outlines a roadmap to unleash the full potential of CCTNS. The question that the Police Leadership needs to examine is, how can CCTNS be leveraged to make police processes victim-centric and police responses proactive.

Incorporating the three pillars of the road map for bringing about a paradigm shift from Process- centric to Victim-centric Functioning and from Reactive to Proactive Response, a model intervention at the stages of investigation and trial has been designed as follows. It is proposed that an App based access may be provided to a complainant where she can log in for all relevant information and support services with respect to the FIR filled by her. She would not require to go to a Police Station or call up police officials for simple issues like a copy of the FIR. Various services to empower a victim can be provided, again in collaboration with the private partner. Backward and forward linkages with the Police Control Room, CCTNS data and with other government agencies like the Health Department, Child Welfare Committees, Municipal Bodies and the One-stop-centres.

Following is a sample interface which includes suggestions about various services that may be provided through the mobile App.
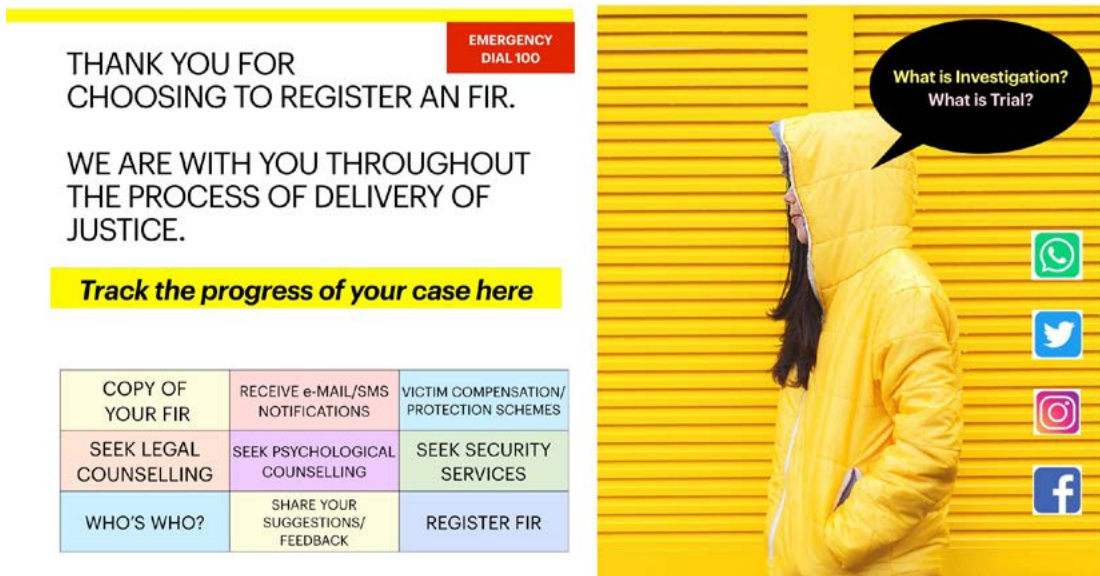
Illustration 3: A model for interventions at the stages of investigation and trial through leveraging the full potential of CCTNS

1. The red button in the middle is the EMERGENCY/DIAL 100 button that provides direct access to the Police Control Room or Dial 100 Control Room. This is for occasions when an App user finds herself in an emergency situation or

life threat. On the right hand side, links to social media accounts in the name of the App have been prominently placed.

2. 'What is Investigation?' and 'What is Trial?' Would provide simple and easily intelligible definitions and explanations of the processes involved, to prepare the victim for her journey ahead.

3. 'Track the progress of your case' is probably the most important service that can be provided very easily with suitable interlinkages with the CCTNS. Access to important documents that she is entitled to like FIR, Medical report, Age certificate, Chargesheet etc. and notifications of important events like Chargesheet/Final report filed in the court, charges framed by the court, summons issued, date of deposition/hearing etc may be provided under this link. For automatic updating of the entries here, this may be linked directly with the CCTNS entries of this particular case. Automated message alerts to the complainant may also be activated on this button.

4. A victim may need a copy of the FIR on several occasions. This button provides a single click access to the same for future use.

5. A victim may provide her consent using the button 'Receive E-mail/SMS notifications' to the Police to send regular updates to her on her case, as explained in point 2 above.

6. 'Victim compensation/protection schemes' would provide detailed information about eligibility criteria, process, sanctioning authority etc regarding all such schemes at the level of the GoI or the state government. Application forms for these may also be made available here as well as contact details of the departments concerned. To that extent this information would be static. However, if interlinkages with such departments are possible, this could be made a dynamic service with the facility of tracking one's application.

7. Services like legal and psychological counselling may be linked back to the first App being run by a private partner.

8. Security Services may be required for a victim who may be threatened or attacked by the accused or others at their behest. This may be availed free of change if covers by an existing scheme or may be made available private security services on a payment basis.

9. 'Who's who' would provide contact details of all officials involved in the investigation and trial processes and other related departments like health, prosecution officer etc.

10. 'Register FIR' button here allows the victim to report an incident of threat to or attack on her by the opposite parties to pressure her to withdraw her case. Such FIRs would strengthen prosecution case, facilitate bail cancellation and most important, ensure safety and security of the victim.

Therefore, CCTNS may not be limited to digitisation of records and sharing of data, it could be taken to the next level of making police processes victim-centric and police responses proactive. With basic infrastructure and Human Resources already in place for the running of the huge country wide network of crime and criminal tracking, it just requires a quantum leap from a static system to a dynamic one. Simple AI and mapping tools could be employed for a dynamic interpretation of data on sexual violence against women

in cities, to draw a comparison across cities, identify what works and what doesn't and draw up preventive and proactive strategies and plans. Augmenting Police's own data sources like their PCRs and CCTNS with data and information contributed directly by the women navigating a city presents immense possibilities.

CONCLUSION

Sexual Violence against women and children in public places has emerged as a global pandemic. In India, particularly in urban centres, sexual violence on streets, in public transport and other public spaces holds women and girls back from fully and meaningfully participating in the social, political and economic dimensions of urban growth. The Indian Parliament has made various forms of sexual violence in public places criminal offences with punishments ranging from 6 months to life sentence and even death penalty. Yet, the incidents of horrific rapes and murders continue to shake the conscience of the nation and heinous offences continue to be part of daily lives of women and girls navigating a city.

These circumstances pose a **Strategic Leadership Question before the Police Organisation.** The question is probably a momentous opportunity for the Police to pursue the long term goal of Police Reforms on the one hand and on the other hand, to bring about a paradigm shift from process-centric functioning to victim-centric functioning and reactive response to pro-active response, by stepping into the shoes of a victim, by leveraging technology and by collaboration and partnerships with other stakeholders including the women and girls navigating a city.

The concept note proposes a roadmap to bring about the two paradigm shifts using Mobile App based interface with victims and prospective victims of sexual harassment in public places in cities. The proposed solution aims at empowering the women who choose to officially complain against such harassment. The most important prerequisite for achieving the goal of safe cities for all the is commitment of Police Leadership to this end.

The proposed solution empowers women, gives them an agency and makes them partners of Police in improving security scenario- both real and perceived. To that extent, it would contribute towards alleviation of women's condition by addressing certain practical gender needs. And in a longer run, this would also contribute towards uplifting the women's overall position in the society by addressing strategic gender needs.

(About the Author: Alankrita Singh is an officer of the Indian Police Service of the 2008 batch borne on the Uttar Pradesh cadre. She has served as Superintendent of Police in four different distracts and as Deputy Director at Lal Bahadur Shastri National Academy of Administration at Mussoorie, where she also served as Executive Director of the National Gender and Child Centre. She has edited a book on Brick Kilns in India and several issues of the journal 'The Administrator'.

The above project was conceptualised for the purpose of writing an assignment for her Phase 3 training program at NPA in November 2019 which was further researched and detailed into a comprehensive Pilot Project. This emanates from the author's original ideation and may not be copied or reproduced without express prior permission of the author.)

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21. *Safecity provides a platform for sharing testimonials, instances of sexual abuse and blogs for exchange of ideas on the subject. Safecity also uses heat maps to pinpoint unsafe locations, but it is not limited to the online mode. There have been attempts to partner with local stakeholders and find simple locally relevant solutions like painting a wall with graphics carrying subtle messages of women empowerment or getting CCTVs or street lights placed.*

22. *Safetipin uses map and crowdsourced data to provide services like 'safety ratings', 'safe routes', unsafe 'red spots' and 'track my route'. Their safety rating is an aggregation of certain indicators like lighting, visibility, people density, gender diversity, security and transportation and the information in this regard is provided by the app users.*

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24. *This exercise of stepping into the shoes of a victim and asking the question why would a victim support the police and prosecution, needs to be answered for all stages- from reporting and registration of FIR to investigation to trial.*

25. *The success of the model would be contingent upon a fair and transparent process of selection of a partner, selection of a competent partner with impeccable credibility and integrity and laying down clear terms and conditions of the partnership and respective roles and responsibilities.*

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Based on the author's interaction with officers from 7 different states in India, MAJOR HURDLES TO IMPLEMENTATION OF CCTNS, AS PERCEIVED BY POLICE OFFICIALS are as follows -

- *Computers or OSs are outdated*
- *Software has unresolvable technical issues*
- *Power and connectivity failures in rural/remote areas*
- *Lack of trained personnel*
- *Personnel earmarked for CCTNS being deployed for other duties*
- *Personnel designated for CCTNS(constables) made to work on IOs login for filling up case diaries*
- *Personnel view CCTNS as an additional workload on the already overworked poorly resourced Police.*
- *Personnel believe it is unnecessary and disrupts traditional way of functioning of Police*
- *Equipment diverted for other office work*
- *Payment issues with BSNL*

Role of Perceived Control in Organizational Commitment of Police Personnel

Abhay Pratap Singh[1]
Sushma Pandey[2]
Shashi Kant Upadhyay[3]

Abstract

The study attempted to find out the relationship of perceived control with organizational commitment and to examine the impact of perceived control over the organizational commitment of police personnel. A total of 240 male police personnel (officers, sub-inspectors, and constables) were randomly selected from various police stations of eastern Uttar Pradesh. Background information was assessed by personal data sheet whereas perceived control of police employees was determined by perceived control scale. An organizational commitment scale was used to assess the level of commitment in police employees. Data were analyzed with the help of correlation analysis and stepwise multiple regression analysis. The correlation coefficient indicated that perceived control was found linked with organizational commitment. Specifically, perceived control was found significantly positively linked with affective commitment further, positive but low correlations were found between perceived control and other domain of commitment (continuance and normative) as well as an overall commitment. Regression results also indicated that perceived control contributed positively to affective commitment. But Continuance and normative commitment were not significantly predicted by perceived control.

Key Words: Organizational Commitment, Perceived Control, Police Personnel, Regression

Introduction

During the last few decades, organizational commitment has been an important studied area in the field of organizational psychology. In each organization some features are common and some specific features differ. Despite this, each organization has its unique set of characteristics and properties. This psychological structure of the organization and its sub-units is usually referred to as organizational culture/organization climate.

In this context, the police organization is the largest in India.

Several reports pointed out that policemen work for long and arduous hours on most days of duty, very much over the normal eight hours (National Police Commission, 1979; National Productivity Council). The policemen work on gazetted holidays when others celebrate their festivals. They are sometimes not able to avail their normal leave every year. Hard-working culture, refusal of leave, bad interaction

Author's Introduction:

1   Assistant Professor, Dept. of Psychology, Akhilabhagya Post Graduate College, Ranapar, Gorakhpur.
2   Professor and Head, Dept. of Psychology, DDU Gorakhpur University Gorakhpur.
3   DIG, BPRD, New Delhi, Ph. D Scholar, Galgotia University, Gautam Budh Nagar, UP.

between officers and employees produce high levels of work stress in police employees for which low levels of perceived control, suicidal attempt, and aggressive behaviours with officers at the workplace occur. The latest case cited in print media focuses that the constable had fired 13 rounds from a service rifle and shot his senior officer of R.P.F, allegedly after the constable was refused leave (Times of India, 26 Feb 2018). Hindustan Times reported that upset over the duty allotted to him, a CRPF constable allegedly shot dead an assistant commandant and a sub-inspector (Hindustan Times, 18 Jan 2018). The reason behind these cases is the low level of perceived control; therefore it can say that high perceived control positively influences the level of commitment of employees at the workplace.

Perceived control is the perception that one has the ability, resources, or opportunities to get positive outcomes or avoid negative effects through one's actions. The concept of control has been one of the most pervasive and enduring ideas in psychological research and theory. Numerous theories posit an important role in human behaviour for control constructs such as **self-efficacy** (Bandura, 1977), **locus of control** (Lefcourt,1981), **causal attribution** (Winner, 1985), and **helplessness** (Seligman, 1975). Having a sense of control has consistently been found to have adaptive effects. Perceived control is associated with emotional well-being, the reduced physiological impact of stressors, enhanced ability to cope with stress, improved performance, less pain, and a greater likelihood of making difficult behavior changes (Thompson & Spacapan, 1991).

Studies have shown the positive role of perceived control in enhancing health status and positive social behaviors (Pandey,2003; Tripathi,2006). Tiwari (2006) evinced that personal factors (active and adaptive coping)

enhance the level of commitment in Railway employees. Singh (2013) evinced that perceived control along with coping played a positive role in mitigating the work stress-commitment relationship. Therefore, perceived control may enhance the level of organizational commitment in police personnel.

Organizational commitment refers to the employee's emotional connection, identification with, and relationship in the organization(Swailes, 2002). Organizational commitment can be defined as the relative strength of an individual's satisfaction with and involvement in a particular organization (Porter et al., 1974). Meyer and Allen (1991) propounded a three-component model of organizational commitment 1- Affective commitment refers to the employee's emotional attachment to identification with and involvement in the organization (Want to). 2- Continuance commitment refers to an awareness of the costs associated with leaving the organization (Need to). 3- Normative commitment reflects a feeling of obligation to continue employment (Ought to).

Researchers studied several factors that play a contributing role in organizational commitment. Mathieu and Zajac (1990) have identified the antecedents of commitment under two categories. First- Personal characteristics like age, sex, education, marital status, tenure, perceived competence, ability, salary, other factors. Second are Group Dynamics, Job Characteristics, Organizational Characteristics, and the Role States.

Time spent with the organization may build an employee's psychological attachment to an organization. As does the length of service increases, so do the benefits increase (like pay increment, pension, power, and position). In this direction, Cohen (1983) found that the relationship between tenure and commitment was the strongest for the oldest tenure

sub-group. Larger organizations are seen as less personable and harder to identify with (Mathieu &Zajac, 1990). Stevens et al., (1978) suggested that larger organizations may increase the chances of promotion and other forms of side benefits and increase the opportunities for interpersonal interactions, thereby increasing commitment levels. Morris and Steers (1980) found three structural characteristics; formalization, functional dependence, and decentralization. They suggested that perceived decentralization is likely to be associated with participative decision making and increased commitment level through greater employee involvement. Apart from this, Colarelli, Dean, and Ronstans (1987) evinced that both personal and situational variables affected job outcomes, including commitment, and they found that situational variables accounted for greater variance in organizational commitment. These findings were further supported by Colarelli and Bishop (1990). Mowday, Porter, and Steers (1982) have identified the link between Personal and Organization Commitment. Researchers suggest that several factors lead to greater organizational commitment including early in an employee's tenure with an employer. Another factor, primarily non-organizational factors that enhance commitment is the availability of alternatives after the initial choice has been made along with reward, costs, and investment (Rusbult & Farrell, 1983). Certain other factors discovered are; job satisfaction and job involvement (Stevens, Beyer & Trice, 1978), work motivation and job satisfaction (Khan & Mishra, 2002; Ahmad & Mishra, 2000; Srivastava, 1999), stress and health (Ahmad & Mishra, 2000; Srivastava, 2002; Srivastava, 1999), social support (Khanna, 2000; Vashishtha & Mishra, 1998) and work environment (Khan & Mishra, 2002).

A close perusal of the review of studies reveals that the level of commitment is moderated by numerous contextual and psychological factors. Against this backdrop, this study was planned to investigate the linkages of perceived control with the organizational commitment of police employees belonging to different job hierarchies and job tenures.

Problem Statement and Operational Definition of Terms

From extensive literature on organizational commitment and perceived control, the following problems have been raised:

1. What would be the relationship of perceived control with an organizational commitment of police employees belonging to different job hierarchies and job tenures?

2. How does perceived control influence the organizational commitment of police employees?

The above problems have been studied in the present work in detail. Two psychological terms are used in the present study first is organizational commitment and the second is perceived control. The term **organizational commitment** refers to the employee's emotional connection, identification with, and relationship in the organization. Affective, continuance and normative commitment were used in the present study. Affective commitment refers to the employee's emotional attachment to identification with and involvement in the organization. Continuance commitment refers to an awareness of the costs associated with leaving the organization. Normative commitment reflects a feeling of obligation to continue employment.

Another important term **Perceived control** can be defined as the belief that one sees he or she has control over their inside state, behaviors, and the place or people or things or feelings or activities surrounding a person. Indeed

perceived control is the perception that one has the ability, resources, or opportunities to get positive outcomes or avoid negative effects through one's actions.

Objectives:

1. To examine the relationship between perceived control and organizational commitment.

2. To investigate the relative contribution of perceived control in organizational commitments (Criterion Variable).

Hypotheses:

Based on the above objectives, the following hypotheses were formulated: It was hypothesized that-

1. Perceived control and organizational commitment would be positively related to each other.

2. Organizational commitment would be predicted by perceived control.

Method

Design

The present research is correlational.

Participants: A total of 240 male police personnel participated in the present study. A stratified random sampling technique was used. Sample selection was done including three groups of job hierarchy (officers, sub-inspectors, and constables) from different sections of the police department of Gorakhpur zone i.e. Fire Station, S.T.F office, police station, PAC, Home Guard Office, Traffic Offices, Radio Sections, etc.

Measures

A set of measuring tools was used for the present study. A brief description of these measures is given below:

(i) **Personal Data Sheet:** Background information of each participant was assessed by Personal Data Sheet.

(ii) **Perceived Control Scale**: The level of perceived control in police employees was assessed with the help of a modified version of the perceived control scale (Jain, 1984; Pandey,2003). This measure includes 16 items describing a real-life situation. A five-point scale with anchor points 'no control' (1) to complete control' (5) was used. Responses given by participants on the perceived control scale were scored following 1,2,3,4 and 5 order. All summated scores on all items denote the level of perceived control in participants. This test is a highly reliable measure of perceived control (r =.43).

(ii) **Organizational Commitment Scale (OCS):**The revised scale of organizational commitment developed by Allen & Meyer(1991a) and adopted by Khan and Mishra (2002) was used to ascertain organizational commitment. An Indian adaptation of the organizational commitment scale, made by Khan and Mishra, (2002) was used. This scale contains three components of commitment (18 items) i.e. Affective, Continuance, and Normative. The positively worded items are to be scored in items of 1,2,3,4,5 order whereas, reverse order i.e., was applied for the scoring of negatively worded items. All summated scores in each dimension denote the level of commitment (dimension-wise). A high score indicates high-level commitment and a low score indicates low commitment. A reliability coefficient for this scale was fairly high (r = .88).

Procedure:

Respondents were contacted in their workplaces. They were introduced to the

problem of the study. Each participant was promised that his personal views and information would not be disclosed at any cost. After receiving the initial willingness of the respondents to participate in the study, their background information was collected based on Personal Data Sheet (P.D.S). Then, they were requested to respond on the perceived control scale and organizational commitment scale. As soon as, they completed their responses on these measures, filled answer sheets with measures were collected and respondents were thanked for participation. Answer sheets were scored according to defined rules as given in manuals. Obtained scores were analyzed with the help of SPSS.

Results

Obtained results were treated statistically in terms of correlational analysis and step-wise multiple regression analysis. Results are given below.

Relationship between Perceived Control and Organizational Commitment: To investigate the relationship between perceived control and organizational commitment, correlational analysis was done. Obtained results are displayed in Table 1 and interpreted below.

Table 1: Relationship between perceived control and organizational commitment

Variables Perceived Control & Organizational Commitment	(r)
Perceived Control & Affective commitment	.153*
Perceived Control & Continuance commitment	.012
Perceived Control & Normative commitment	.035
Perceived Control & Overall commitment	.106

N = 240, ** = P< .01, * = P< .05

Table 1 shows that perceived control was found to be positively correlated with affective commitment (r= .153, P< .05). Positive but low correlations were found between perceived control and other domain of commitment as well an overall commitment.

Present results thus, evinced that with increasing the level of perceived control, the commitment towards the organization in police personnel has increased.

Based on the perusal of correlation results, it was considered appropriate to go for step-wise multiple regression analysis (SMRA) to examine the relative contribution of antecedent factors in the criterion variables. Results are in order

Prediction of Organizational Commitment by Perceived Control

To examine the relative contributions of perceived control to commitment, step-wise multiple regression (SWMR) analysis was computed. Results are displayed in Table 2 and Figure 1.

Table 2: Step-wise multiple regression analysis for commitment (affective) on to the perceived control

Predictor Variable (Perceived control)	Criterion (Affective commitment)					
	R	R²	R² change	Beta β	t	F
Perceived control	.41	.17	.02	.15	2.40	12.07**

N = 240, ** = P< .01, * = P< .05

Regression results (Table 2 & Fig.1), indicated that affective commitment was predicted by perceived control, which contributed significantly positively ($\beta = .15$, $R^2 = .17$), this contribution was found to be a 2% variance in criterion variable. Continuance commitment and normative commitment were not significantly predicted by perceived control.

Finally, it can be said that perceived control is a powerful way of controlling internal and external states for making an organizational commitment. Therefore it is true high controlling high commitment, low controlling low commitment.

Discussion

Present correlation results indicate that perceived control was found positively correlated with affective commitment. Regression results indicate that perceived control contributed positively to affective commitment.

Present results and other studies also indicate that perceived control played a favorable role in enhancing commitment in police personnel. Singh (2013) evinced that perceived control works positively enhancing the level of commitment in police employees. Pandey (2003) also found that a high level of perceived control buffered the ill-consequences of stress on the health and well-being of persons. In a comprehensive study, Tripathi (2006) identified that perceived control modified the impact of crowding stress on the social behaviors of students.

Based on present findings and other research, it is proved that perceived control has played a positive role in the promotion of organizational commitment in police personnel (Maccoby,1983; Mishra & Srivastava,1997; Pandey,2003; Tripathi, 2006; Singh, 2013). Perceived control is the degree to which individuals feel their behavior affects outcomes of personal and organizational relevance. In a study, Mickelson, Kessler, & Shaver, (1997) pointed out a significant positive association of internal locus of control and securely attached individuals (, such that securely attached individuals were high in internal locus of control). Significant associations were uncovered for avoidant and anxious individuals, as well, such that individuals fitting those classifications were high in external locus of control. Locus of control is also associated with affective commitment, such that individuals with an internal locus of control report higher levels of affective commitment than those with an external locus of control (Coleman, Irving, & Cooper, 1999). Other findings indicate that organizational commitment was found to be positively related to an internal locus of control (Luthans, Baack, & Taylor, 1987). Cohen (1992) also reported a stronger correlation between person variables and organizational commitment of the employees working in low hierarchical positions.

Besides it, perceived control played a significant role in enhancing other personal and organizational outcomes. Studies have shown the positive role of perceived control in enhancing health status and positive social behaviors (Pandey,2003). Tiwari (2006) evinced that personal factors (active and adaptive coping) enhance the level of commitment in Railway employees. Tiwari and Mishra (2008) evinced that work stress and health status strongly predicted organizational commitment in Railway employees. Singh (2013) evinced that perceived control along with coping played a positive role in mitigating the work stress- commitment relationship. Therefore perceived control may enhance the level of organizational commitment in police personnel. Studies reveal that locus of control is associated with various other job attitudes. It has been found that those who have an internal locus of control expressed higher job

involvement (Pathak, 1982).

Present findings were also validated based on self-efficacy, locus of control, and action theory of perceived control. If a person has better self-efficacy, understanding in employees will also be strongly developed in an organization for which negative thoughts move from mindsets and positive ideas begin to run in mind.

Finally, based on present findings and other research findings and theoretical construct, the powerful role of perceived control in enhancing the organizational commitment of employees has been proved.

Conclusion

This study has provided notable results revealed that a positive relationship between perceived control and organizational commitment has existed as well as perceived control is a significant predictor of organizational commitment in police employees. If police employees do not have control over their minds and situation, an affective commitment of employees towards the organization may be an imbalance. An overview of present results and other researches evince that high perceived control enhances the level of organizational commitment in Police employees. Indeed, Commitment acts as a powerful factor in regulating employees' well-being and organizational outcomes. Since commitment is not only influenced by perceived control at work but also by other intra-individual and extra-individual factors such as self-efficacy, age, education, tenure, organizational support, OCB, fairness, and justice, employees' positive emotional reactions may help in enhancing the level of commitment. Finally, it can be said that present findings suggest a broadening view to understand the role of perceived control on organizational commitment of police employees, therefore, there is a need to study with another demographic, individual, and organizational factor.

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Effects of Hierarchy on Job Satisfaction and Integrity of Police Personnel: A Research Note

Dr. Mahesh Kumar Maurya*

The Indian Police Journal

Abstract

The present study was conducted with the objective of investigating the nature of the relationship between job satisfaction and integrity of police personnel at different hierarchical levels.The study was conducted on a sample of 350 non-gazetted police personnel(205 constables, 30 head constables, 85 sub-inspectors and 30 inspectors). The data have been collected on the police organization in the state of Uttar Pradesh in India. Participants' responses were obtained on questionnaires which measured demographic characteristics, job satisfaction (Dantzker's, 1993) and integrity (Schoorman, Mayer & Davis, 1996) on five point scales. Statistical analysis of the data through one-way ANOVA showed there were significant differences between the constables, head constables, sub-inspectors and inspectors participants with regard to job satisfaction and integrity. Mean ranking of job satisfaction reported by the police personnel at different ranks revealed that highest levels were observed among inspectors (M=71.96) followed by, head constables (M=66.80), sub-inspectors (M=64.30) and constables (M=61.70). Mean ranking of integrity reported by the police personnel showed highest levels among head constables (17.53), followed by inspectors (17.23), sub-inspectors (16.64) and constables (14.21). Correlation and simple regression analysis showed a positive correlation and significant prediction of integrity among police personnel by job satisfaction at different ranks under study. The results of this survey have important implications for police organizations which aim to promote job satisfaction for eradicating corruption by rewarding police personnel for their integrity.

Key Words: Job Satisfaction, Integrity, Indian Police.

Introduction

Improving integrity has become a major concern in the public sector. The KPMG Integrity Survey 2013 reveals nearly three out of four employees reported having observed misconduct within organizations. The increase in public sector unethical conduct has led to the intensification of efforts to boost integrity with codes of ethics, norms and policies meant to create an effective civil service delivery system. India was ranked 81st among 180 countries in Corruption Perception Index(CPI) 2017 released by Transparency International. CPI characterized India as among worst regional offenders in Asia Pacific region on grounds of journalists, activists, opposition leaders and even staff of law enforcement or watchdog agencies being threatened or even

Author's Introduction:

*   Assistant Professor, Department of Psychology, C.M.P. Degree College, University of Allahabad, Allahabad (U.P.), India.

murdered. Morler (2004) stressed that integrity is expected to provide a sense of dignity and the core of personal power, growth and happiness. In addition, Miller (2010) stated that integrity would reduce the problem of misconduct. The police sector in India is susceptible to corruption and can thus carry high risk for business. The efficiency of the police varies across the country. Three-quarters of the surveyed households in India perceive the police to be corrupt and citizens frequently encounter bribery demands when dealing with officers (GCB, 2013). The securities forces are generally overworked, underpaid, and remain subject to political pressure, which leads to instances of corruption (HRR, 2016; BTI, 2016). In India, promoting and enhancing integrity is a major component of governmental reforms.

Integrity

The concept of integrity has been proposed by various researchers as an antithesis of corruption, which is after all a covert illegal transaction between two parties. In contrast, integrity is an inherent individual characteristic that predisposes one not to participate in illegal and unethical behaviour or corrupt activities. In addition, unlike corruption, integrity is a personality trait that comprises an inherent sense of honesty and uprightness of character which can be measured (Sauerman, 2008). In recent times, it has become essential for agencies to foster a culture of integrity, especially law enforcement agencies. Given the fact that corruption remains an anomaly in both the public and private sector, it is argued that it might signify a precise work-related threat for law enforcement agencies locally and abroad (Newham& Faull, 2011). Integrity concerns the quality level of being honest and having strong moral principles. Various definitions of integrity were found in the literature including Carter (1997) exhorted that a person with integrity is usually honest,

but an honest person may have little integrity due to the demands of integrity being more than honesty. Carter (1997) also mentioned that integrity requires three steps; "discerning what is right and what is wrong, acting on what you have discerned, even at personal cost; and saying openly that you are acting on your understanding of right and wrong''. Klockars, Ivkovic & Haberfeld (2004) defined police integrity as "the normative inclination among police to resist temptations to abuse the rights and privileges of their occupations". Integrity can also be defined as "a moral judgment upon an act and is also a judgment upon the character or selfhood of the one doing the act" (Dewey &Tuffs, 1932). The reason for this assertion could be attributed to the fact that the police are awarded a wide range of state sanctioned power which includes utilization of force and authority to restrict the freedom of civilians. These powers can easily be abused, often with a low risk of negative repercussions (Faull, 2011). Ultimately, police integrity means three things. First, when members of the police operate within their legal authority. Second, when they execute their responsibility in accordance with accepted police practices. Finally, when the law enforcement officers go about their business in an ethical manner, consistent with expectations of the community they serve (http://www.cops.usdoj.gov/default.asp?Item=1663). In terms of the organizational theory, components or facets that constitute police integrity include knowledge of organizational rules, perception of seriousness of transgressions or misconduct, organizational discipline, and willingness to report misconduct (Klockars, Ivković&Haberfield, 2004).Thus, integrity is a quality of being honest and having good moral judgment either as an individual or as a public servant to eliminate unethical behaviours such as being corrupt or committing fraud and

others illegal activities.

In assessing integrity among police officers, a study conducted by Klockars, Ivkovich, Harver and Haberfeld (2000) found that the corruption of individual police officers reflects their moral defect. They further stressed that integrity and corruption in the police agencies in the United States involves attitudes of serious misconduct and the abuse of police authority for personal gain. Their study also showed that the characteristics of a police agency's culture encourage its employees to tolerate certain types of misconduct such as discouraging a colleague to report on the engagement of unethical behaviour.

Job Satisfaction

Job satisfaction is a combination of employee feelings towards the different facets of job such as the nature of work itself, level of pay, promotion opportunities, and satisfaction with co-workers. In this context, feeling implies a pleasurable or positive emotional state resulting from the appraisal of ones' job experiences. Job satisfaction is associated with increased productivity and organizational commitment, lower absenteeism and turnover, and ultimately, with increased organizational effectiveness (Ellickson& Logsdon, 2001). According to Wright and Davis (2003), the benefits that employees receive from their organizations influence the effort, skill, creativity and productivity that they are willing to give in return. Lack of job satisfaction has been found to lead to lethargy and reduced organizational commitment (Moser, 1997). Lack of job satisfaction has emerged as a predictor of quitting a job (Alexander, Lichtenstein &Hellmann, 1998). Sometimes workers may quit from public to the private sector and vice versa. Sometimes, movement is from one profession to another. Poor condition of service and late payment of salaries is responsible for

quitting a job and decreasing job satisfaction. Availability of power and status, promotion opportunities, pay satisfaction, wellbeing, trust, lack of workplace harassment, supportive leadership, motivation to lead, work support, greater responsibilities, authority, and social recognition with increasing rank and task clarity strengthen job satisfaction (Gemenxhenandez, Max, Paradiso & Robinson, 1997; Helliwell & Huang, 2011;Maurya & Agarwal, 2013a, 2013b, 2014, 2015, 2018;Kula, 2016;Kumar & Kamalanabhan, 2017, Kumar, 2017).If a person is dissatisfied with his job it will affect the productivity of the organization. Perceived operational stress was found to be significantly associated with their work-related burnout, but not with their job satisfaction (Kula, 2016).Siu, Cheung and Lui (2015) found that positive emotions were positively related to PsyCap; that work well-being (both job satisfaction and stress symptoms) fully mediated the association between PsyCap and turnover intention. In addition, positive emotions had a direct negative effect on stress symptoms. Shenbaham & Divyasa (2016) found that majority (70%) of the female police officers were satisfied, (20%) of the respondents highly satisfied, (6%) of the respondents moderate satisfied, remaining (2%) of the respondents dissatisfied and extremely dissatisfied. Lambert, Qureshi, Frank, Klahm& Smith (2017) conducted a survey on 827 police officers in the Sonipat and Rohtak districts of the Indian state of Haryana using a systematic random sample. The findings indicate that job involvement and job satisfaction were associated with lower levels of all three dimensions of burnout (emotional exhaustion, depersonalization and a reduced sense of accomplishment). Job stress was associated with emotional and reduced accomplishment burnout. High affective commitment was associated with lower levels of a reduced sense of personal accomplishment, while continuance

commitment was associated with higher levels of emotional and depersonalization burnout.

Police Services in India

India, with an area of 3.287 million km² and population of around 1.34 billion, is a union of 29 states and 7 union territories (As of 1 January, 2018). The powers and responsibilities of the union and states are demarcated in the Constitution of India. Article 246 of the Constitution distributes the legislative powers between the Parliament and the State Legislative Assemblies. It refers to three lists of subjects given in the Seventh Schedule of the Constitution:

List 1: Union List - includes subjects in respect of which the Parliament has the sole power to make laws.

List 2: State List - includes subjects in respect of which the State legislature has exclusive powers to make laws.

List 3: Concurrent List - consisting of subjects on which both the Parliament and the State Legislatures have concurrent powers to make laws.

Article 246 of the Constitution of India places the police, public order, courts, prisons, reformatories, borstal and other allied institutions on the State List. It is important to discuss a few important *characteristics of the system* before explaining the organisation and working of the police in India.

As most police organizations, the Uttar Pradesh police are a hierarchical organization. The department consists of highly structured rank hierarchy starting from the lower most rank of constable, head constable, head constable promoted (equivalent to assistant sub inspector), sub-inspector (in-charge of a smaller police station or Chowki), inspector (in-charge of a police station), deputy superintendent of police (in-charge of a sub-division in the district), additional superintendent of police (Addl. SP), superintendent of police (in-charge of the district), senior superintendent of police (in-charge of the bigger district), deputy inspector general of police (in-charge of a range, which comprises a group of districts), inspector general of police (in-charge of a zone, which comprises few ranges), additional director general of police (Addl. DGP) and the highest rank of the director general of police (in-charge of the state police force). It is also important to note that not all officers start their careers at the rank of constable, the lowest rank, but most do. Most police organizations in India, including the Uttar Pradesh Police, have four hiring ranks—constable, sub-inspector, deputy superintendent of police, and assistant superintendent of police. Different qualifications are prescribed for entry at these four ranks. For instance, at this time, a person would need to have passed intermediate (10+2) or an equivalent examination for selection as a constable, while an undergraduate degree is required to apply for a sub-inspector rank or higher. Promotions are made according to merit and seniority; however, most officers hired at the rank of constable rarely rise above the rank of sub-inspector or inspector. The leadership of the Indian police is provided by Indian Police Service (IPS) officers. IPS officers are selected by holding an annual competitive examination conducted by the federal government. Most ranks from superintendent of police to deputy inspector general of police are occupied by IPS officers. The largest numbers of officers are at the rank of constable, and there are fewer officers at each rank going up the Indian police hierarchy chart. The basic administrative unit of policing in India, including the Uttar Pradesh Police, is the district which is headed by an IPS officer with the rank of superintendent of police. The superintendent of police functions basically as the police chief for the district.

The district unit is responsible for all policing activities including investigations, patrol, traffic, security of important government officials, and intelligence gathering.

Objectives and Hypothesis of the Current Study

The present study was conducted with the following objectives:

1. To examine the levels of job satisfaction and integrity of police personnel at different ranks e.g. constables, head constables, sub-inspectors and inspectors. It was hypothesized that there would be significant differences in the reported levels of job satisfaction and integrity at various ranks.

2. To examine whether job satisfaction of police personnel at different hierarchical levels e.g. constables, head constables, sub-inspectors and inspectors, would be positively related to their integrity. It was hypothesized that job satisfaction would be positively predictive of the integrity of police personnel at all levels.

METHOD

Sample

The study was conducted on a sample of 350 (205 constables, 30 head constables, 85 sub inspectors and 30 inspectors) non gazetted police personnel (refer table-1 for demographic profile). The data have been collected on the police organization in the state of Uttar Pradesh in India at seven districts namely Varanasi, Mirzapur, Allahabad, Lucknow, Sitapur, Barabanki and Bhadohi. Mean age of the sample in the civil police organization was 40.67 years, mean experience of the participants is 18.41 years and mean salary of the participants is 36588.08 rupees. The minimum age of participants in the sample in the civil police organization was 21 and maximum age was 60. The minimum experience of the participants is 1 year and maximum experience of the participants is 40 years. The salary drawn by the civil police ranged from Rs. 21,000 per month to Rs.80000 per month.

Table-1 Demographic Profile of Police Personnel

	Total (N=350)	
	(n)	(%)
Sex		
Male	248	70.90
Female	102	29.10
Age Groups (In Years)		
20-30	83	23.70
30-40	102	29.10
40-50	93	26.60
50-60	72	20.60
Experience Groups (In Years)		
1-10	107	30.60
10-20	99	28.30
20-30	79	22.60
30-40	65	18.60

Salary		
20001-35000	213	60.90
35001-50000	100	28.60
50001-65000	20	5.70
65001-80000	17	4.90
Rank		
Constable	205	58.60
HC	30	8.60
S.I.	85	24.30
Inspector	30	8.60
Education		
H.S.	18	5.10
Intermediate	79	22.60
Graduation	166	47.40
P.G.	87	24.90

Measuring Instruments The following instruments were utilized to measure the variables understudy:

Demographic variables: Six items were used for getting information about the participants' age, experience (number of years served in the police force), salary, gender, education and rank.

Job Satisfaction: Dantzker's (1993) job satisfaction scale (JSS) was used for measuring job satisfaction. The scale consisted of twenty three items commonly referenced in the job satisfaction literature, including supervision, pay, benefits, equipment, assignment, and recognition. The items are written in a Likert-style format using a scale of one (1) to (5), (1=extremely dissatisfied and 5=extremely satisfied) where respondents are asked, "How satisfied are you with …". On the basis of item total correlation analysis in the pilot study, 22 items were retained for the final study. The scores ranged from 22 to 110. The reliability coefficient of the scale was 0.93.

Integrity: The scale, for measuring integrity, developed by Schoorman, Mayer and Davis (1996) was used. This is one dimension of trust. Responses were collected on a Likert-type five- point scales ranging from (1) "totally disagree" to (5) "totally agree". The scale contains 5 items. The original scale which was in English was translated in Hindi. The response score range was 5-25. The observed internal consistency Chronbach's alpha value for this scale based on the sample of the present study was found to be .81.

Procedure

Police personnel participants were approached by the researcher after obtaining permission from the authorities. Participants were allowed to complete the survey privately and were instructed to return their results to the researcher. All 350 subjects voluntarily completed and returned the survey while the researcher maintained confidentiality. A quota sampling method was used. It is one form of non-probability sampling, in which knowledge of strata of the population-sex, race, religion and so on.-is used to select sample members that are representative; typical and suitable for certain research purpose.

RESULTS

Table 2. Mean, Standard Deviation (S.D.), and F Values of Job Satisfaction and Integrity in Police Personnel with Different Ranks

Variables	Constables (N=205)		Head Constables (N=30)		Sub-Inspectors (N=85)		Inspectors (N=30)		F
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	
Job Satisfaction	61.70	18.98	66.80	17.91	64.30	18.57	71.96	14.01	3.12*
Integrity	14.21	6.09	17.53	4.790	16.64	4.49	17.23	5.59	6.95***

***p< .001 level, **p< .01 level, *p<.05 level (2-tailed test)

Statistical analysis of the data through one-way ANOVA(Table-2) showedthere were significant difference between the constables, head constables, sub inspectors and inspectors participants with regard to job satisfaction(t=3.12; p<.05) and integrity(t=6.95; p<.001).Mean ranking of job satisfaction reported by the police personnel at different ranks revealed that highest levels were observed among inspectors (M=71.96) followed by, head constables (M=66.80), sub-inspectors (M=64.30) and constables (M=61.70).Mean ranking of integrity reported by the police personnel showed highest levels among head constables (M=17.53), followed by inspectors (17.23), sub-inspectors (16.64) and constables (14.21).

Table 3. Inter-correlation between Job Satisfaction and Integrity for Entire Sample (N=350) and Within Each Group Constables (N=205), Head Constables (N=30), Sub-Inspectors (N=85), Inspectors (N=30)

		Integrity
Job Satisfaction	Total Sample(N=350)	.61***
	Constables (N=205)	.65***
	Head Constables (N=30)	.52***
	Sub-Inspectors (N=85)	.50***
	Inspectors (N=30)	.63***

***p< .001 level, **p< .01 level, *p<.05 level (2-tailed test)

Results (Table-3) showed that correlation analysis reveals positive correlation of integrity among police personnel with job satisfaction at different ranks, constables (r=.65, p<.001), head constables (r=.52, p<.001), sub inspectors (r=.50, p<.001) and inspectors (r=.63, p<.001) under study. Entire sample correlation analysis reveals positive correlation of integrity among police personnel with job satisfaction (r=.61, p<.001).

Table 4. Stepwise Regression Analysis of Job Satisfaction with Integrity of Constables (N=205), Head Constables (N=30), Sub-Inspectors (N=85) and Inspectors (N=30) Civil Police Personnel.

Variable	R	Adjusted R Square	R Square Change	Standardized Coefficient β	t
Constables					
Job Satisfaction	.65	.42	.43	.65	12.27***
Head Constables					
Job satisfaction	.52	.24	.27	.52	3.22***
Sub Inspectors					
Job Satisfaction	.50	.24	.25	.50	5.29***
Inspectors					
Job Satisfaction	.63	.37	.39	.63	4.26***

***p< .001 level, **p< .01 level, *p<.05 level (1-tailed test)

Constables Results showed (Table 4) that job satisfaction significantly, positively predicted 43 percent variance in integrity of police constables with a beta value of .65.

Head Constables Results showed (Table 4) that job satisfaction significantly, positively predicted 27 percent variance in integrity of police head constables with a beta value of .52.

Sub Inspectors Results showed (Table 4) that job satisfaction significantly, positively predicted 25 percent variance in integrity of police sub inspectors with a beta value of .50.

Inspectors Results showed (Table 4) that job satisfaction significantly, positively predicted 39 percent variance in integrity of police inspectors with a beta value of .63.

DISCUSSION AND CONCLUSION

Statistical analysis of the data through one-way ANOVA showed there were significant differences between the constables, head constables, sub inspectors and inspectors participants with regard to job satisfaction and integrity. Mean ranking of job satisfaction reported by the police personnel at different ranks revealed that highest levels were observed among inspectors (Position-1) followed by, head constables (Position-2), sub-inspectors (Position-3) and constables (Position-4).Mean ranking of integrity reported by the police personnel showed highest levels among head constables (Position-1), followed by inspectors (Position-2), sub-inspectors (Position-3) and constables (Position-4). Correlation and simple regression analysis supported the hypothesized patterns of relationship between job satisfaction and integrity of police personnel. Findings highlight the positive correlation and significant prediction of integrity among police personnel by job satisfaction at different ranks under study. In a related study, Miller (2010) stated two factors influence the behavior and moral character among police profession; deficiency in external factors that would work against the desire of police officers and, deficiency in some character traits needed in a person. It shows how these factors would influence the level of integrity among police officers. The study focused on job satisfaction which acts as an internal factor influencing the level of integrity among police officers and codes of ethics which are the most

desirable elements needed in a profession such as police officers. Matlala, Mistry & Phala (2016)also measured the integrity of police officers in the Gauteng Province and found that generally, law enforcement officers have knowledge about official rules of their agencies although it seemed to be inadequate in some cases. It was also established that the code of silence is exceptionally strong among law enforcement officers across all the Law Enforcement Agencies studied. The results of this survey have important implications for police organizations which aim to promote job satisfaction for eradicating corruption by rewarding police personnel for their integrity.

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Standard Operating Procedure for Audio-Video Interview of Anticorruption Cases

Dr. Priyanka Kacker[1]
Ms. Unnati Sharma[2]

Abstract

The interrogation of suspect is considered to be one of the most crucial stages in the investigative process not only in criminal cases but also in civil cases for which the procedure, effectiveness and ethics of interrogation should be standard or proper. Being the first of its kind Audio Video interrogation centre at School of Forensic Psychology, National Forensic Sciences University (erstwhile known as Institute of Behavioural Sciences, Gujarat Forensic Sciences University), Gandhinagar, Gujarat; more than 100 cases were interrogated at SFP, NFSU. However, there were certain lacunas in the interrogation process which was observed and understood by the forensic Psychology expert at SFP ultimately lead to preparation SOP for ACB cases. The purpose of study was to recommend modifications in interrogation process done by police interrogators in Anticorruption Bureau (ACB) cases of interrogation based on 100 Audio Video interviews of the ACB cases conducted at Institute of Behavioural Sciences, National Forensic Sciences University, Gandhinagar, Gujarat. The two majorly affected tools of the interrogation process are firstly, the format, type, and way of asking questions are discussed and secondly, the interrogation should be done by a qualified and trained forensic psychologist or criminologist.

Key Words: Standard Operating Procedure, Audio Video interviews, Anti-Corruption Cases.

INTRODUCTION

The interrogation of suspect is one of the most crucial stages in the investigative process not only in criminal cases but also in civil cases for which the procedure, effectiveness and ethics of interrogation should be standard or proper. The purpose of study is to recommend changes in interrogation process done by police interrogators in Anti-Corruption Bureau (Hereafter read as ACB) cases such studies of interrogation based on 100 Audio Video recorded interviews of the ACB cases which has got conducted in National Forensic Sciences University, Gandhinagar, Gujarat. Here we shed light on the two majorly affected tools of the interrogation process. First, the format, type and way of asking questions are discussed. Secondly, the interrogation should be done by a qualified and trained forensic psychologist or criminologist. Investigation process of ACB Interrogations is one of the most crucial stages in the investigative process. The fundamental goal of an interrogation is to collect information regarding the crime in issue from the individual whom the police suspect is involved in or knows about the

Author's Introduction:

1   Senior Assistant Professor, School of Forensic Psychology, National Forensic Sciences University, Gandhinagar.
2   M.A. Criminology Student, School of Forensic Psychology, National Forensic Sciences University, Gandhinagar.

crime (Memon et al., 2003).In the presence of other evidence, which may be the case in most criminal investigations, the interrogation of the suspect may lead to unclear issues (for example, detailing the suspect's location at the time the crime happened) being solved, as well as admissions Interrogations may result in a confession from the suspect in the lack of proof, or form the basis of an assessment of the likelihood that the suspect under question is guilty. If, after the interrogation, the police consider the suspects involvement in the crime to be unlikely, the spotlight might be shifted to other prospective culprits. Because interrogations are seen as a key stage in the investigation of crime, it is critical that they be carried out in an effective, productive, and ethical way. Several miscarriages of justice connected to the interrogation situation (where, e.g., the use of coercive interrogation tactics has led to false confessions, the relevance of queries) have publicly revealed the police's lack of procedural and ethical requirements.These cases have generated outcries for legislation regulating the circumstances surrounding interrogations of suspects (Sear & Williamson &380 M. Hartwig, Sear & Williamson, 1999; 380 M. Hartwig, P. Anders Granhag& A. Vrij Williamson, 1993). However, it is critical to understand what happens in the interrogation room, the impact of the questioning methods used on detainees, and, most significantly, how to conduct interrogations in the best possible way (Bull, 1999). This review will attempt to answer such questions. A few methodological difficulties surrounding the research of interrogations should be highlighted briefly. Studies concerning interrogations are in general to be based on Audio video recording interrogations and in a proper format which is lacking under the current procedure of interrogation. Thus, if one seeks knowledge about what types of interrogation tactics and techniques are employed in police

investigations. Model of Police Interrogation Style Following in ACB cases

Regardless of an individual's actual involvement in the offence of which he or she is accused, there are three major sets of factors that may influence a suspect's initial response to an allegation: the suspect's and offence's background characteristics; the contextual characteristics of a case; and an interviewer's questioning techniques. Interviewing tactics are influenced by the interviewers' views and attitudes, which are influenced by the case's background and contextual factors.The following and final replies of the suspect during interrogation will be governed by the suspect's evaluation of the relative benefits of response change caused by the interviewer's reply to the suspect's initial response. It is critical to distinguish between an initial and a final reaction to an allegation because additional questioning might influence a suspect's decision-making based on the interviewer's assessment of the suspect's approach and future questioning strategies.

METHODOLOGY

2.1 Rationale of the Study

The purpose of this research is to study the current interrogation procedure of Anticorruption Bureau (ACB) cases and to find out the limitations in the procedure. According to the identified limitations, a Standard Operating Procedure for the ACB cases is proposed to increase the reliability and authenticity of the interrogation process which can further aid a Forensic Psychologist/ Criminologist or any authorised person in the investigation. This further helps in creating an opportunity for expert handling of the interrogation, simultaneously expanding job prospects for authorised individuals. The current interrogation process is carried out in the presence of audio-video recording devices.

2.2 Objective

To study the current interrogation procedure followed for ACB cases. To identify the lacunas in current procedure of ACB cases. To recommend a Standard Operating Procedure for Audio video recorded ACB cases.

2.3 Sample

The sample of the present study consisted of 100 (N100) cases of Anti-Corruption Bureau. These ACB cases interrogations were conducted with the audio video recorded interviews of the suspects of individual cases. The suspects were sent to the National Forensic Sciences University's Institute of Behavioural Sciences in Gandhinagar for testing. This questioning procedure is being observed for the first time in India at the IBS of the National Forensic Sciences University. Purposive sampling was employed as a sample strategy. Inclusion Criteria:

ACB cases studied are the ones with financial crimes defined as white collar crimes that are punishable under IPC sections

Exclusion Criteria:

Except for white collar offences, every illegal activity was prohibited. Offenders with mental illness or neurological disorders were excluded. Violent offenders and sexual offenders were excluded from the study.

Tools:

Audio-Video Recording Set-up: It is basically a control room, controlling the audio-visual activity of interrogation room presenting there and to guide according to the situations. In the interrogation room the sense of privacy should be maintained Room should be plain in colour

Lighting should be good, not excessive or glaring illumination on the faces of interviewee and interviewer. Microphones should be close to the conversation means at head or either side of subject. The recording start button is at

Audio visual recording lab etc.

- *Files Consisting of Documents:*

- *Permission Letter*

- *Copy of First information report (FIR)*

- *List of questions to be asked*

Interrogation Room

What people imagine it might look like

What it looks like

Interview location, the initial stage and lowest degree of engagement are interviewing potential suspects. At this stage, the individual is not even defined as a suspect. Suspects frequently report criminal activities while acting as witnesses or even victims of the crime, as we discussed in our chapter on witness management. When an investigator receives a statement report from such a person, he or she may suspect that they are not telling the truth. However, unless such suspicions are substantiated by information that satisfies the standard of developing reasonable grounds for belief, the investigator may continue to speak with this potential suspect without delivering any Section 10 Charter or warnings. At that time, there is a unique chance to obtain the poser's version of events, including any inaccurate claims that may provide an opportunity to later investigate and reveal a probable fabrication, which is a criminal offence in and of itself. When genuine evidence is obtained, that gives the investigator reasonable reasons to think that the person is engaged in the occurrence, the transition point for an investigator to shift from interrogating a witness or victim to detaining and questioning the individual as a possible suspect should occur. When genuine evidence is discovered and reasonable grounds for suspicion are established, the investigator is obligated to stop interrogating the individual who has now become a suspect.

At this stage, the suspect should be held for the suspected offence and given the proper Section 10 Charter and Statement Caution before interviewing the subject.

Other factors to consider:

The size of the room, and if it is too large for successful communication.

Is there any natural light in the room?

Do not position the interviewee such that he or she is staring out of a window.

This often allows them to feel like they can escape the interview. How many people will be present in the interview room, and how do we minimize unwanted participation. How do we control the room when we are in their location?

2.4 Procedure:

The current study utilized extensive literature reviews on Anti-Corruption Bureau cases and on interrogation procedure. The literatures indicated that in India minimal work has been performed with respect to the interrogation procedure of Anti-Corruption Bureau cases. Furthermore, the data from the interrogations of ACB cases via the case files was collected from the School of Forensic Psychology, National Forensic Sciences University, Gandhinagar. The case files included a request letter for the audio video recorded interrogation of the suspect in an ongoing investigation, FIR report of the case and questionnaire prepared for the interrogation of the suspect of respective case. Moreover, the Audio video recording room and Interrogation room settings were observed. The set-up of the rooms was noted, process of building a questionnaire for interrogation along with the person who conducts the same was inquired upon, the process of the interrogation was observed and the required members during an ongoing interrogation were determined. The trapping procedure and further proceedings

were understood by discussion with police inspectors and investigating team of Anti-Corruption Bureau. The interviews conducted in National Forensic Sciences University are kept completely confidential and these are being used exclusively for research purposes for improvement in the process of interrogation for future investigations.

RESULTS AND DISCUSSION

The purpose of the present study was to develop a Standard Operating Protocol that can help in identifying notable distinct attributes in the investigation procedure of anticorruption bureau and questions asking by them during the suspect's interview. For this purpose, the research also studied the procedure followed by officers of anticorruption and have seen the recordings and read the documents including copy of FIR, permission letter and the list of questions asked by the officers for better understanding of the current procedure of interrogation, besides studying the procedure, the study also aimed at studying the relationship between the suspect and the complainant. One of the objectives of the study was to identify the lacunas in current procedure of Anticorruption Bureau cases based on which research can recommend Standard Operating Procedure for Audio video recorded Anticorruption Bureau cases. The values obtained show that the cases interviewed in National Forensic Sciences University from 2017 have highly reported in the year of 2018 and majorly at Vadodara comparative to other places. These are the only incidents where police officers were able to apprehend the perpetrators after receiving a complaint The data analysis of the variances in the different aspects in the case of the present anticorruption interviewing procedure. The fact that noticed here the very first statement of the suspect also should be taken under the control of audio video recording set-up and

if not, then the police officer should submit a first statement of the suspect and further every statement should be taken in the same way. Table: Showing cases interrogated at IBS, NFSU in a particular year (201719) Type of Cases Number of cases reported per Year Row Labels 2017 2018 2019 Grand Total Academic 1 9 2 12 Industrial Department 20 4 24 Others 40 16 56 Police Department 24 7 31 Grand Total 1 93 29 123

Graph: Showing cases city wise cases interrogated in year 2017, 2018 and 2019

It is found that the interrogation taken by the police officer after taking under the custody usually got delayed because of the previous procedures and sometimes because of informing late to the forensic psychologist under observation which the audio video recording conducted. It is also observed through the research that during the interrogation and interview process at audio video recording set-up there should be an interview scheduled for the witnesses which should be done for the accuracy and authenticity of the evidence, at least, eyewitnesses should be taken into account. When genuine evidence is obtained that gives the investigator reasonable reasons to think that the person is engaged in the occurrence, the transition point for an investigator to shift from interrogating a witness or victim to detaining and questioning the individual as a possible suspect should occur. While reading the files for the data researcher has found that the copy of the FIR attached with some information which was not related to the case and if related there is no proper information of the same like the name of the person was not mentioned in the copy of FIR. There is an interview or questionnaire formed for the same and if it's done by the permission of any of the senior officer the permission letter should be added for the same. Although the person is a suspect who should be detained

for the suspected offence and provided with the appropriate Section 10 Charter and statement Caution before proceeding with the questioning of the suspect, the courts remain vigilant in assessing how the police interview, question, and interrogate suspects during investigations. The courts require police to uphold high standards by employing techniques that prioritise the rights of the accused while minimising any physical or mental hardship that might lead to a false confession The issues of suspect questioning and interrogation in achieving these expectations may be complicated, and many police agencies have trained interrogators and polygraph operators who conduct suspect interrogation in important criminal cases. The difficulty for police personnel is that improper interviewing, questioning, or interrogation tactics might jeopardise the questioning of a suspect and the eventual confession. Understanding the proper procedures and legal constraints might be the difference between a suspect's confession being accepted as evidence by the court or being rejected. Among the most important concerns are:The journey from interviewing through questioning to interrogation, and how it connects to investigative procedures.

The points at which it is necessary to go from interviewing a witness to questioning a detained suspect to interrogating an arrested suspect.

Physical and emotional distress difficulties, as well as ways to prevent the appearance of officer-induced anguish during interrogation

The five most prevalent reasons why detained individuals surrender their rights to remain silent and offer testimony or admissions

The three sorts of fraudulent confessors and ways to deal with them

The additional rights of juvenile offenders,

as well as the methods necessary to satisfy investigative commitments. In this research, the procedure of interview follows this step: Guidelines

Consent

Standard Operating Procedure

Fig.: Steps for Interrogation of Anticorruption cases

Guidelines: The very first step of the interview in which the instructions are given for the interviewee and the interviewer. By determining the position's primary functions, the core job tasks that an interviewer must be able to do properly are characterised as essential functions. During the interview, they should keep in mind that every step of the Standard operating procedure should be asked properly and effectively. The major points which should be covered in this as follows:

Leading and Direct Questions

Avoid leading questions that suggest an answer

Once the interviewee has told demographic detail, then ask direct questions related to the case and trapping day to fill in gaps and clarify

You can use reference points as necessary, but do not suggest an answer Interviewing techniques

Not all suspects will be forthcoming with information

Answering questions with questions

Repeat the question as you originally asked it

Phrases like that's basically it or I guess that's all I can remember

Consent: The second step in which suspects are thought to give conventionally informed consent is in terms of the documents signed and dated by the interviewee, which set forth the purpose, benefits, risks, and other study information required to allow the interviewee to make an informed and voluntary decision to participate in the interrogation procedure. By signing the certificate, the suspect agrees to the following statement:

The interview will take (enter amount of time). The researchers do not foresee any hazards linked with your involvement, and the researcher reserves the right to terminate or withdraw from the interview at any moment. The National Forensic Sciences University's ethical standards for interviews require respondents to expressly consent to be interviewed and how the material included in their interview will be utilised. This consent form is necessary to ensure that researchers understand the purpose of involvement and that researchers agree to the conditions of participation for an audio-video recording interview

Standard Operating Procedure: It describes the way a certain function must be carried out. Standard operating procedures are crucial to any organization's long-term performance. Procedures help you to identify and bundle your components for success, making it strategic, repeatable, and adaptable. The highlighting points which are covered in the research and in the formed Standard Operating Procedure are:

Did you both talk on call

What did you talk on call

Did you talk about money transactions

_____Statement is said by you

What were you doing in the trapping area

_____ What was your talk about

CONCLUSION

A well-structured standard operating procedure for ACB interrogation was developed based on the cases interrogated at SFP, NFSU Audio

Video equipped Interrogation room. The study also attempted to develop a Standard Operating Procedure for Anticorruption Bureau that can help them in taking a proper interview sequentially with basic details of the individual that is necessary for further investigation. This research has focused on the interview procedure of the anticorruption cases, how it is practised by the officers and further it should be done by a trained Forensic Psychologist and Criminologist. A better interrogation can lead to use of forensic psychological investigation techniques like LVA, BEOS and Polygraph; Kacker P., &Shukal, P. (2020);Kacker, P. (2018);Keshav Kumar, J.M.Vyas, Kacker, P. (2018).

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Effective Leadership in Correctional Settings: A Study in Gujarat Prisons

Dr. KLN Rao[1]
Dr. Reena Sharma[2]

Abstract

Developing countries often lack the crucial resources for their prisons to live up to international standards. It could be in terms of lack of funds, trained personnel, technology, infrastructure, or expertise to proceed with all of the necessary reforms in a given situation. Irrespective of all odds, dedicated leaders accomplish significant progress and work towards raising the standard of their work in prison and uplift the quality of life of prisoners in the prisons , where prisoners focus is on their primary objective to reforming themselves. The constant challenge to work and perform in the odd situation such as COVID 19 or any other challenges adhere to the compliance. Prisons can be a difficult place for prison management and inmates especially when they work without the fundamental human, physical and monetary assets. The work of leadership is unavoidably an extremely difficult one. It plainly requires the full responsibility of a solid, committed, inventive and persisting person. Prison leaders frequently need to manage a fairly narrow public view of the goals of imprisonment. A great many people would like to see detainees punished as opposed to rehabilitated unless we have reformative leadership. . The objectives of the paper is to study leadership functioning in prisons worldwide and to examine the nature of leadership, its effects on prison inmates in Gujarat prisons. It will also study how the police leadership and correctional administration tackled the nationwide pandemic and still managed to create a space where it can be possible to minimize the occurrence of the disease and as a result of their efforts, has been major findings. Gujarat Prison and Correctional Administration has been awarded with Skoch Gold Award for excellent work and recognized at an all India level for the COVID-19 Response.

Key Words: leadership, leader, qualities, officials, corrections.

Introduction

Proficient correctional leadership is the way to set up and keep up humane prisons. Well-run detainment facilities are not brought into being by acceptable way of thinking, great laws, or great claims, despite the fact that, no doubt, these are vital.' Without insight, able and in any event, inspiring prison leadership, there is minimal possibility of making good, considerably less valuable prison conditions and tasks (Jacobs and Olitsky, 2004).

Contemporary associations work in conditions portrayed by quick change and complexity (DeRue and Myers, in press). Prison staff associations are no exemption. Prison staff are needed to comprehend and adequately

Author's Introduction:

1   DG, Gujarat Prisons Correctional Administrations.
2   Founder and Forensic Psychologist The Mind Practice, Ahmedabad, Gujarat.

work in a perplexing social, political, and authoritative climate (Casey and Mitchell, 2007). There is expanded interest for responsibility, progressions in innovation, rise of new wrongdoing types, severity measures, authoritative changes, expanding need for local area commitment, and some other challenges.

Aims and Objectives of the study

1. To study leadership functioning in prisons worldwide.

2. To examine the nature of leadership, its effects on prison inmates in Gujarat prisons

Review of literature

1. Leadership qualities and skills required in correctional settings:

Prison authority is a focal piece of the inmate social structure and has been significantly liable to concentrate since the start of studies on restorative settings (Akkers, 1977). Penitentiaries and remedial offices house offenders who have been condemned to detainment. They additionally house people who have been blamed for having committed an offence and who are anticipating preliminary, or have been indicted for an offence and are anticipating their sentence. In post-clash and other basic circumstances, penitentiaries are in some cases additionally used to keep intellectually sick detainees who can't be set somewhere else, unlawful workers or displaced people, political detainees, past warriors, and even survivors of crime. The circumstance is frequently one where prison administrators don't actually think a lot about the prison populace and the attributes of the actual detainees. In numerous occasions, detainees are confined unlawfully and there is no simple path for directors to figure out who is legitimately dedicated to the establishment

and who isn't. These are irregularities which ought to be remedied at the earliest opportunity yet which by and by make extra difficulties for prison leaders.

Correctional leadership is practically an unexamined section, lacking writing in regard to what is important to be a successful correctional executive (Harper, 2016). The corrections industry in this manner needs to stay serious in drawing in and holding leaders if the industry will have chiefs with adequate capabilities to lead viably in the C-suite of the association (Jacobs and Cooperman 2012; Gendreau et al. 2009; Stinchomb 2011, Stinchomb et al. 2011; Stinchomb et al. 2009; Tossi 2012).

Characteristics of police leadership (Pearson-Goff and Herrington): First was being 'ethical', which was by and large characterized as showing a feeling of uprightness and genuineness, and in doing as such, having the option to produce a feeling of reliability among one's subordinates. (Bryman and Stephens, 1996; Fleming, 2004; Murphy and Drodge, 2004; Schafer, 2008, 2009, 2010a; O'Leary et al., 2011; Vito et al., 2011). Next is having a capacity to produce a feeling of 'trust' and 'dependability' inside the prison staff association, just as operationally between the prison staff and the community (Beck and Wilson, 1997; Atwater et al., 2000; Schafer, 2008, 2010b; Wheatcroft et al., 2012). Firmly identified with trust was 'legitimacy in the eyes of one's staff', portrayed as the requirement for leaders to be viewed as 'good coppers' and for subordinates to realize that a leader can do the work of a cutting edge official (Duncan et al., 2001; Rowe, 2006; Silvestri, 2006; Schafer, 2008, 2010b) . The operational focal point of this might be a component of a decent extent of the examination being founded on the impression of prison staff leaders according to subordinates. (Singer and Singer, 1990;

Atwater et al., 2000; Engel, 2000; Densten, 2003; Murphy and Drodge, 2004; Johnson, 2006; Andreescu and Vito, 2010; O'Leary et al., 2011) 'Communication' was another key characteristic, both in terms of communication within the prison staff organization as well as communication with one's subordinates (Bryman and Stephens, 1996; Dantzker, 1996; Beck and Wilson, 1997; Duncan et al., 2001; Densten, 2002; Murphy and Drodge, 2004; Silvestri, 2007; Schafer, 2008, 2010a, 2010b; Steinheider and Wuestewald, 2008; Dick, 2011; O'Leary et al., 2011), and having an ability to communicate across organizations and be an active voice in government and stakeholder policy development (Butterfield et al., 2004, 2005; Fleming, 2004; Meaklim and Sims, 2011).

Effective police leaders were seen to be skillful 'chiefs' and ready to settle on c hoices that prompted the accomplishment of objectives (Dantzker, 1996; Atwater et al., 2000; Metcalfe and Dick, 2000; Densten, 2003; Schafer, 2008, 2010a; Andreescu and Vito, 2010; Dick, 2011). Moreover, the manner in which leaders settled on their choices assumed a significant part in their protecting authenticity and regard from subordinates with the contribution of subordinates in decision making perceived to hold positive benefits for organizational commitment (Murphy and Drodge, 2004), Relatedly, effective 'thinking ability' was important with critical, strategic, and creative thinking regarded as key attributes of successful leaders (Gaston, 1997; Davies, 2000; Coleman 2008; Miller et al., 2009; Meaklim and Sims, 2011; O'Leary et al., 2011).

2. Types of leadership in correctional settings

Leading and managing in captive environments, like correctional facilities, prisons, detainment focuses, and disciplinary barracks, vary from driving and overseeing in private area or other public area fields. Hostage conditions are for housing prisoners, detainees, offenders, detainees, etc with whom staff cooperate as a component of their positions (Eggers, Porter and Gray, 2011).

Transactional Leadership Style

Transactional leadership practices instill structure for the employees and the organization. Transactional leadership is task-oriented; transactional leadership bases the relationship with followers on punishment and rewards (Bodla & Nawaz 2010). A transactional leader perceives the activities a worker needs to take to accomplish the current assignment. Bass (1985) stated that a transactional leader explains the undertaking for the employee; explanation of objectives and assignments reassures workers. A transactional leadership is acceptable, yet has numerous limits. A transactional leader gives criticism and encouraging feedback.

Transformational Leadership Style

As indicated by Bass (1985), the most effective leadership practices bring about radical shifts with revolutionary ideas. Transformational leaders rouse, energize, and enable workers. They have alluring qualities (Bass, 1985). Leaders with alluring characteristics rouse adherents through individualized thought, and scholarly incitement. Bodla and Nawaz (2010) attested that supporters wish to fulfill the assumptions for a transformational leader.

Laissez-faire Leadership Style

As per Hargis, Watt, and Piotrowski (2011), the laissez-faire leadership is a non-leader. A laissez-faire leader tries not to decide, needs interest, and maintains a strategic distance from duty. A laissez-faire leader leadership position is latent; this leader gives the follower the opportunity to perform assignments without direction or intercession from the leader. Some

who practise laissez-faire leadership try not to give criticism. This type of leadership doesn't show a dream or propel the activity of the follower.

Good leaders and managers in captive environments should remember and strive to be firm, fair, and consistent with staff and inmates, build a culture that brings alive its mission, vision, core values, and goals, be true to oneself and to others, be a "people developer." realize that inmates are people too and treat them with respect, create and sustain trust and promote psychological safety, create positive leader-follower relationships and become a lifelong learner (Eggers, Porter and Gray, 2011).

3. Study of other prisons India and international to see the functioning in their setting

The prison staff administrations in various nations are going through changes. Traditional crime is declining in a few European nations, while we can notice clear modifications in the types of crime taking place. For example, organized crime, cross-border crime, various types of cybercrime, human trafficking and work-related crime have all been on the expansion. Relocation has likewise become a significantly more important issue lately (Hope, 2007).

Prison staff are needed to comprehend and adequately work in a perplexing social, political, and hierarchical climate. There is expanded interest for responsibility from and inside policing; headways in innovation, rise of new crime types, austerity measures, and a plenty of extra difficulties. Leadership is quite possibly the main indicator of whether associations can adequately work in unique conditions and as such the requirement for successful prison staff authority is more noteworthy than at any time. (Pearson-Goff

and Herrington, 2013)

In Australia, the Australian and New Zealand Police Leadership Strategy (ANZPLS), which is a programme of leader improvement for senior officials, draws on leadership capabilities created by the magistrates of prison staff in every one of the Australian and New Zealand wards. These capabilities incorporate forming key course, accomplishing results, constructing and overseeing connections, speaking with impact, and representing individual drive and trustworthiness. These wide headings identify with leadership expectations at every one of the center and senior positions, and under each there are various (contrasting) social markers that pioneers can be evaluated against. There is much in like manner too with competency structures created outside of policing, including the Australian Public Service Commission (APSC) abilities (APSC, n.d.) and those formulated by the National Health Service (NHS) in the UK (NHS, 2006). Regarding directing the improvement of leaders, these competency approaches mirror the collection of information, obviously as we have just noticed, this information depends to a great extent on insights instead of target proportions of effective leadership (Pearson-Goff and Herrington, 2013).

Discussion:

Leadership management during crisis

A clear example of effective correctional leadership was found in Gujarat prisons through the management of prisons during a pandemic. The various challenges to leadership can be understood specially during a time of crisis. In the year 2020, the whole world came in the grip of the coronavirus, which was termed by the World Health Organization as a pandemic. On 18 March 2020, the Director General of Prison, Gujarat had held a meeting that brought preventive strides for COVID-19

to the table. Challenges faced during the pandemic were overcrowding in prisons, minimizing physical contact, keeping provision of medical and testing facilities, protective gear and protecting inmates and staff. However, proper measures were taken for making a space where the event of the infection can be limited, for example, limiting overcrowding, ensuring physical and mental health, safety measures, ensuring access to continued health services adhering to human rights guidelines and adequate preventive measures to forestall the huge flare-ups of COVID-19. An intensive coordination framework was set up to meet all ends.

Law enforcement leaders frequently do not have the essential training and experience to lead during complex emergency episodes including different organizations, particularly those with overlapping duties (Saltz, 2017). Research in crisis leadership reliably focuses on the requirement for leaders to settle on imperative and conclusive choices, frequently with inadequate or conflicting data (James and Wooten, 2010).

Leadership strategies during pandemic

To deal with the spread of COVID, certain means for safety measures were started according to rules of Gujarat State Health Ministry and Jail Bhavan, Gujarat Prisons, Ahmedabad. Work force's sterilization and neatness is done at the principle section point of remedial settings. Checking of the internal temperature of the workforce while entering prison premises was made compulsory as was disinfection of the workplace at the main gate. Keeping up tidiness of barracks and prison premises is necessary. Misting under a sterilization programme of complete prison premises was finished. Showering of sanitizer arrangement under the sterilization programme of prison premises was finished. Mass sanitization of Sabarmati Central Jail,

Ahmedabad and Sabarmati ladies' focal prison and routine splashing of sanitizer answers for disinfecting prison staff, detainees and prison premises is additionally compulsory.

To reduce overcrowding in prisons, interim bail was granted liberally by the High Powered Committee constituted as per the orders of the Hon'ble Supreme Court. Several unused places in the prisons were cleaned and sufficient space for quarantine was created. To ensure that there was no crowding when the inmates returned, a proper staggered schedule was developed and a reintegration plan was put in place.

In order to minimize physical contact, all prisons were connected through the head office through VC facility and there was continuous monitoring and feedback. To reduce movement and contact, maximum court appearances were done through VC, thus ensuring huge benefits in terms of time, human resources, vehicles, safety etc. Outside food was disallowed to reduce contact. Adequate liaison was established between the prisons, district administration, health authorities and municipal authorities. Sufficient number of inmates were screened daily and samples were freely taken as per protocol. Internal medical infrastructure of prisons was boosted. For all covid cases, constant monitoring was done and all contact person were isolated and samples were taken.

Management skills in leadership among Gujarat prison officers

Leadership is a movement and an asset that is mostly connected to position and rank in the prison staff. It is an asset that is required at all levels in prison staff associations (Fleming, 2015). Administration is practised at key center and senior levels, just as on the cutting edge. Each cop settles on evaluations and choices, imparts, and along these lines practises

authority in their day to day activities, when managing different issues and occurrences. Andreescu and Vito (2010) state that (prison staff) leaders are required to produce a feeling of direction that both motivates and directs followers so they deliberately make an important commitment to the association.

Gujarat Prisons were at that point following Bombay Jail Manual Guidelines to forestall the spread of winter's viral illnesses. As there was no COVID-19 SOP, Gujarat Prison arranged its own SOP subsequent to consulting in-house specialists, and later these were converged with the government-proclaimed SOP. Officials exclusively chipped in and spoke with the other state officials and traded the prescribed procedures with the particular states to help meet each end of the circumstance to their best capacities. To ensure that there was no contamination from the outside, only those inmates were inducted who had tested COVID-negative. Those testing positive were referred for treatment. Even after induction, the inmates were kept in quarantine for 15 days. Thus the effect of infection, if any found, could be minimized. Even the prison staff who went on leave, were allowed to resume duty only after COVID test.

Leadership as a movement requests that we investigate how one as a leader gives administration, how one recognizes and creates individuals in the associations and how one focuses on developing the association from a more all encompassing point of view (Hope, 2017). Gujarat prisons were done over with awareness banners that very much educated the detainees with COVID-related happenings around the planet; and hygienic etiquette and social distancing steps to forestall the viral contamination. Essential data about side effects of COVID was verbally educated by specialists in each barrack and flyers were stuck at all sleeping quarters with

"Do's and Don'ts".

The correctional administration stepped up, did strong video conferences, made prison SOPs and furthermore were in contact with different states to share the prescribed procedures and thought of their own quick SOPs which were executed to battle with COVID 19. Later these SOPs were inspected and converged with WHO rules issued for prisons around the world.

Self assisting methods in leadership

With the increase in COVID cases across the nation, detainees thought of a solution to deal with it. The detainees made a decent stock of face covers, hand sanitizers, fluid hand wash, dark phenyl, white phenyl and carbolic cleanser with mass assembling inside the prison, rehearsing the Honorable Prime Minister's Concept of Aatmanirbhar. The prison got not just independent in reality but also gave help to other government organizations.

Prisons have not been very technology-savvy. However, as the COVID-19 appeared, it was transformed into a chance for Gujarat Prison and Correctional Administration to learn better approaches to take the advantage of the internet and innovation to communicate promptly within administrations. In outcome, significant gatherings inside organizations and detainee's gatherings with their families were directed on video meetings. This and numerous different headways in the working of prison furnished with bleeding edge arrangements. Also, authorities affirm that these progressions will proceed for the betterment.

During the lockdown, money order requests were disturbed. Detainees attempted to get cash that brought monetary difficulties for their out-of-prison costs. Consequently, the prison organization presented the e-Money Order for detainees that assisted them with the fundamental necessities of life. With the

beginning of COVID 19 crisis and lockdown, Gujarat prisons redesigned and carried advancements to the world for the assignments that are overseen truly. One such development was e-Prisons; an NIC integrated system for computerizing all the activities related to prison and prisoner management in prisons and provides information about the inmates in a real-time environment to all entities involved in the criminal justice system.

To forestall the spread of COVID-19 from outsiders, prison authorities in the whole state limited actual gathering of detainees' family members. However, to keep a detainee associated with his family and family members, the Government with the assistance of NIC presented an e-Mulakat framework that didn't simply save time, yet additionally costs and escort. Also, for the wellbeing of previously existing detainees, screening of every approaching detainee, video calls, and day by day ongoing investigation were taken.

Encounters and ventures can go a long way. India used innovative approaches and the past experience in disaster management planning. For the excellence in Inspirational or Transformational Performance during COVID-19, Gujarat Prison and Correctional Administration are the sole prison organization to be respected with the Skoch Gold Award For COVID-19 Response.

Mental Health and Prison Wellbeing :

Leadership was instrumental in supporting Samarth Center to work even in toughest times by providing the basics and help coordinate across prisons in Gujarat. The mental health awareness and suicide prevention campaign were run by Samarth – Breaking Barriers Intervention Programme throughout the lockdown period under the essential services. Samarth: Breaking Barrier Center Samarth is India's spearheading Therapeutic restoration

mediation program for offenders dependent on Forensic Cognitive Behavioural Therapy and the philosophy of positive criminology.

One to one therapy sessions and group therapy sessions were conducted by following social distancing norms. Additionally, skill training was given to inmates to cope with anxiety. Their grievances were addressed along with prison staff training to deal with the COVID situation, mental health awareness, Samarth radio programme for prisons on various topics of real-time issues faced by the inmates were addressed and suicide prevention for the prison staff were held to upskill the prison staff in this crisis to help them to have tools they need the most for self and in their role as correctional officers. This created a sense of security amongst the inmates during these trying times and maintained their mental equilibrium. Adequate measures were taken to prevent stigmatization of individuals who were and are considered to be potential carriers of viruses.

Conclusion:

A systematic study of police leadership in prisons during national crisis further highlights the important role leaders play in preparing for and responding to crises. This paper is an attempt to understand prison leadership and its importance in correctional settings in prisons worldwide and in India. COVID-19 placed an unexpected challenge on the correctional administration. The prison staff leaders had to face difficult situations where they had to manage the overcrowding in prisons and many other related obstacles considering a massive human resources. It is also important to train the officers in an effective manner so that they know what to do in situations such as these. Additionally, it is required that we also look at different training modules to enhance the knowledge to work in odd

situations and upskill themselves as well as de-stress from the prison environment will be beneficial. The question also arises if the traditional methods in the system are well equipped to produce great leaders because effective police leadership is an asset and the backbone of proper prison management.

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Examination and Linking of Offset Cross Mark Impressions on a Ballot Paper with their Source: An Unusual Document Case Study

The Indian Police Journal

Sushma Thakur[1]
Mahesh Chandra Joshi[2]

Abstract

The Preparation of a document represents a series of planned acts, but at times important elements become part of the document purely by chance and not through the premeditated design of either those who prepared the document or those who subsequently handled it. In this way latent prints, writing offsets from some other document, ink impressions from writing strokes that are not part of the document in question, and traces of foreign matter with which the document has been in contact find their way into it. More than likely, their presence is entirely unknown to the document's author, creator or handler, but under favorable circumstances, these chance markings and additions can play a significant role or can sometimes point towards a misleading situation or precarious condition. Forensically speaking the questioned documents submitted in the laboratory are not, sometimes, true what they are representing. Also, when question arises about the authenticity of the act or content or history or background and existence of such documents, these extraneous marks, impressions or other iconic marks, etc. have, sometimes, immense evidentiary value for proving or disapproving the point of dispute.

This article presents a case study consisting of examination and analysis of an invalid ballot paper bearing a few extra cross marks referring to the voting against the name of two candidates in senate elections of an institute of international repute. A candidate out of two won by a margin of one vote only consequent upon cancellation of one Ballot paper owing to the existence of the number of extraneous cross marks on ballot paper instead of one. Due to litigation, the Officer on Special Duty (OSD) to the Vice President of India (being Chancellor of the Educational Institute) directed the institute authorities to seek help of Forensic Document Examiners. Extensive scientific examination of the questioned Ballot paper with the use of scientific techniques and available computer software tools could link all the extra feeble offset cross mark impressions resulting due to subsequent multiple folding and careless handling of the disputed ballot paper with one common original cross mark thus proving their progeny and genuineness of invalidated Ballot paper.

Key Words: Iconic Symbols, Decipherment, Superimposition, Cross Marks, Writing Offsets.

Author's Introduction:

1   Scientist "B", Questioned Documents Division, Directorate of Forensic Science Services, (A unit of CFSL, Chandigarh).
2   Director and Scientist "E", CFSL, Chandigarh Unit at Shimla.

Introduction

Document Examiners are many a time encountered with very unusual problems other than the normal routine handwriting and signature examination. It has been observed that very little standard literature on such unusual problems is available and it is also noticed that negligible case work has been done on such problems by laboratories. One such problem is examination of iconic marks (3), faded/feeble, obscured writings and offset impressions/imprints of writings and problems related to their origin and source. Invariably, for such examination original documents are prerequisite that have not been folded, mutilated, marked or altered. Today with the advancement of the technology together with digital one and its easy availability to both forensic experts and perpetrator of the crime, the nature, pattern and intricacies of the crime have taken a paradigm shift and the detection of the same has also become difficult and tricky. Therefore, the responsibilities and task of the questioned document examiner has become diverse as well as he or she has to be keep abreast of the rapid changing pace of the technologies used in the perpetration of the document crimes. Therefore, some of the requirements for Questioned document examiner to conduct examinations of documents other than handwriting examinations are:

i. Knowledge of products and product manufacture

ii. Some experience with materials and their performances

iii. An understanding of appropriate technologies

iv. Appreciation for scientific method

Generally non handwriting examinations are conducted:

i. By a study of the consistencies and inconsistencies of various aspects or elements of the questioned document.

ii. By a comparison of the particular characteristics, features or properties of a document or of the inscription thereon, that may be either physical or chemical, with the known or recorded characteristics emanating from formulations or particular processes of production.

iii. With the assistance/usage of the following enabler tools:

a. Stereomicroscope.

b. Low power magnification, using episcopic (reflected) and diascopic (transmitted) light facilities.

c. Photographic facilities.

d. Electrostatic facilities.

e. Digital tools and image acquisition technologies

f. Sources of ultraviolet and infrared radiation and a means of observing the fluorescence they promote.

g. Appropriate physical or chemical analytical facilities.

h. Collections of standard products, including type styles, writing instruments, writing inks, writing papers, and watermarks [3].

However in case, when two papers or two portions of the same paper come in contact with each other while the fluid ink on one is still damp/wet, a writing offset or ink mark/impression(s) may be produced on the other. To decipher and interpret correctly what the offset mark represents stands as a challenge to those interested in determining the facts. The full force of this challenge can be well appreciated when it is realized that these traces are generally very light fragments of

writing. In some cases, the offset or ink mark proves after accurate decipherment to have only minor significance because of particular circumstance of the case, but there can be instances in which the interpretation becomes forceful evidence linking two documents to a common source [1].

With faint or indistinct offset impressions, which are the general rule, writing offsets or ink marks must be intensified by various means. The image may need to be reversed, for an offset or ink mark is sometimes a mirror image. In the past, this has been done through filter photography, but it is now more common to use computer techniques. Each problem requires protracted study and may require repetition of the same method with slight modification to achieve the best decipherment. When writing occurs on both sides of a page or portions of the same page, there may be strong evidence of transfer of ink to an underlying page or other portion of same page when folded, if the ink is fresh[1]. A scrutiny of the intersection of the ink line and any folds in the paper will often yield evidence which is in conflict with the story which has been related to the preparation of the document [5].

Whenever two or more sheets are stacked or single sheet is folded, traces of writing executed on the top page or portion of page bearing writings tend to become indented or transferred on the sheets below or ink impressions are imprinted on the other portion of sheet. These writing ink impressions or offsets may be useful in connecting a person to a document. Ink impressions or offsets found on note may provide clues to the identity of the writer, such as impressions of letters/ marks previously written. The development of the writing ink impressions may prove that the document has been altered and may not have been made on the date purported.

A number of factors affect the development of impressions or marks. The depth of marks and thus the clarity of impressions/ marks depends upon the pressure of the writing strokes, nature of material (backing) underneath the paper, the thickness and kind of paper, and the sharpness and firmness of the writing instrument. Depending on these factors, the amount of impressed writing may vary from virtually a whole document to a few week and feeble fragments of letters or words, and its legibility from almost that of the original to a mere indecipherable appearance[1].

Within the general category of dingbats or iconic symbols, there are check marks and cross marks. These are two of the other manually executed characters that often enough become matters of dispute, and consequently, are subject to examination and study by handwriting examiners. Unlike numerals and other characters that are usually executed in conjunction with textual material of some sort, check marks and cross marks are seldom a minor part of a larger problem of writing identification. More often they are the principal issue in dispute and their identification, without the help of other material, is sought to establish the validity of a document or documents. They frequently occur with typewritten or printed text and may be the only handwritten element on the document. Cross marks are the usual essence of disputes respecting ballots in election processes [2].

Case and Methodology

Case Brief:

One Questioned Ballot paper declared invalid as per election bylaws consisting of one original cross mark at Serial No. 2 with solid ink lines(Fig.1 cross mark 'a'), few feeble extra offset cross marks in columns at Serial No. 4(Fig.1 cross marks 'c' & 'd') meant for casting of vote in senate elections of an institute of

international repute along with faint offset cross marks outside the columns(Fig.1 cross marks 'e' &'f'), was received for scientific examination and analysis, accompanied with few standard ballot papers and one Blank Ballot paper for comparison. The institute authorities requested the laboratory to opine whether the cross marks existing in the columns against Serial No. 2 and 4 and outside the columns in the original ballot paper were separately/ independently made or otherwise and provide any other clue of evidentiary value after comparing the questioned ballot paper with the supplied standard Ballot papers. No handwriting or signature examination was involved in this case.

Examination and Result:

The questioned ballot paper was analyzed in the light of following points:

i.   Whether the questioned ballot paper was genuine ballot paper used in electoral process or fraudulent document prepared from outside source?

ii. Whether the questioned ballot paper bearing faint/feeble cross marks/ impressions bear signs of alteration/ erasures in vicinity of cross marks/ impressions?

iii. If there are no signs of alterations/ erasures, then what was the source of faint cross marks/impressions?

The Questioned Ballot paper, standard ballot papers and Blank Ballot paper were analyzed under various light arrangements and suitable magnifications utilizing scientific instruments such as stereo-microscope, Video Spectral Comparator, etc. The Questioned ballot paper was scanned at 600 dpi resolution using available scanner and image (Fig.1) was stored. Then, using Adobe Photoshop CS software, the document was analyzed,

the cross mark in the column "Mark showing the voter's choice" against Serial No. 2(Fig.1 cross mark 'a') was flipped horizontally using the adobe Photoshop CS software and then it was superimposed over the faint offset cross marks i.e. cross marks in the column "Mark showing the voter's choice" against serial no. 4(Fig.1 upper cross mark 'c' and lower cross mark 'd') and faint offset cross marks below the columns(Fig.1 upper cross mark 'e' and lower cross mark 'f') one by one. It was observed:

i.   Two dots of toner grains were present at the middle portion of the extreme bottom margin in questioned and all the standard ballot papers which revealed the fact that these all had been produced from a common source. This shows that the questioned ballot paper is the original ballot paper used in the electoral process and its origin is not spurious.

ii. A distinct inked Cross Mark (Fig. 1 Cross mark 'a') in black tint had been put in the column "Mark showing the voter's choice" against Serial Number 2 of the questioned ballot paper.

iii. In the column "Mark showing the voter's choice" against Serial Number 4 of the questioned ballot paper, there was presence of two diffuse faint cross mark impressions/ imprints (Fig. 1, upper cross mark 'c' & lower cross mark 'd') and (Fig.2.c. & d.) of the original cross mark (Fig. 1 Cross mark 'a'). Also, below the columns of questioned ballot paper, there was presence of two diffuse faint cross mark impressions/ imprints (Fig. 1, upper cross mark 'e' & lower cross mark 'f') and (Fig.2.e. & f.) of the original cross mark 'a'.

The collective presence of these four

faint and feeble cross mark impressions/ imprints was an oddity.

iv. There were no marks of erasure/ alteration in the column "Mark Showing the Voter's Choice" against serial number 4.

v. The questioned ballot paper was consisting of creases of multiple folds with a sequence of initial horizontal folding of the sheet into two layers followed by vertical fold resulting in four layers of the sheet and finally horizontal folding subsequently resulting eight layers of the sheet. The horizontal initial crease of the first fold was most pronounced and clear in comparison with remaining creases of the subsequent folds
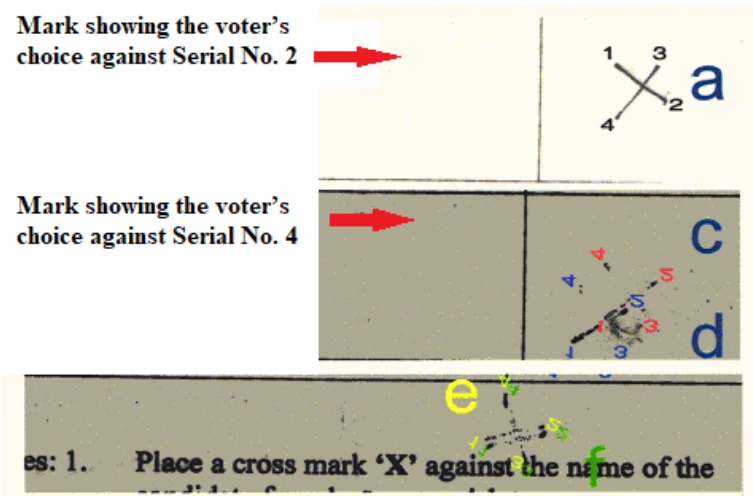

Fig.1. Scanned Image of Questioned Ballot Paper showing cross marks/cross mark impressions against Serial No.2, 4 and below the columns.
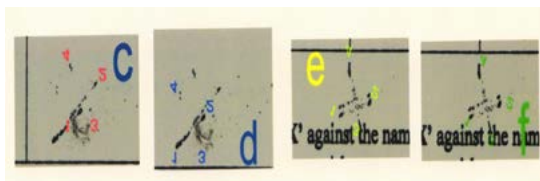

Fig.2. c. & d. Scanned images separately showing upper and lower faint and feeble cross mark impressions/ imprints respectively existing against serial number 4 in the column "Mark showing the Voter's choice".

vi. The upper faint and feeble cross mark impressions (Fig.2.c.) existing against serial number 4 in the column "Mark showing the Voter's choice" were final impressions of the original cross mark(Fig.1.a.) corresponding to the most pronounced crease of the horizontal fold with certain emphasis and pressure in the questioned ballot paper.
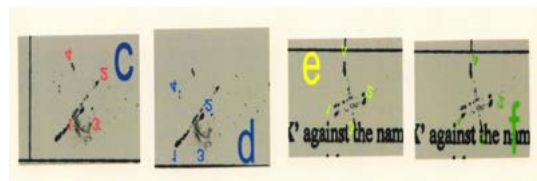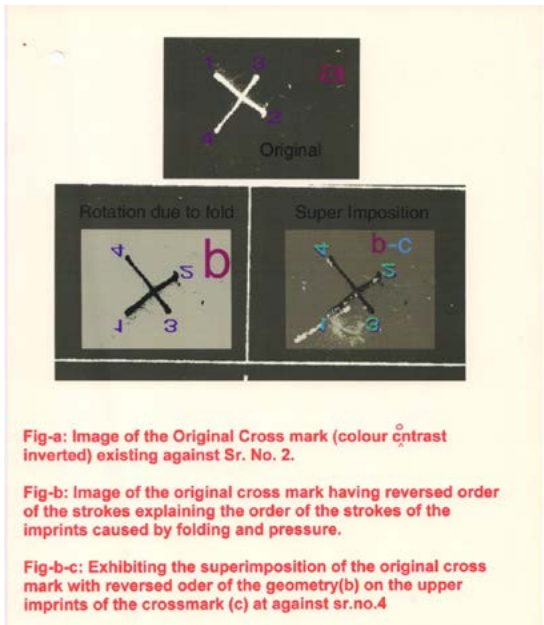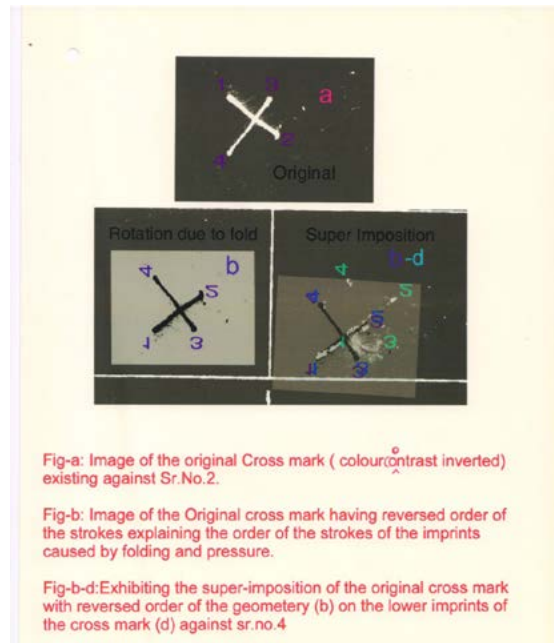

Fig.2. e. & f. Scanned images separately showing upper and lower cross mark impressions/ imprints respectively just below the columns of the questioned ballot paper.

Fig-a: Image of the Original Cross mark (colour contrast inverted) existing against Sr. No. 2.

Fig-b: Image of the original cross mark having reversed order of the strokes explaining the order of the strokes of the imprints caused by folding and pressure.

Fig-b-c: Exhibiting the superimposition of the original cross mark with reversed oder of the geometry(b) on the upper imprints of the crossmark (c) at against sr.no.4

Fig.3. a. Image of the original cross mark (colour contrast inverted) existing against Serial No. 2.

b. Image of the original cross mark having reversed order of the strokes explaining the order of strokes of the imprints caused by horizontal folding and pressure

b-c. Exhibiting the superimposition of the original cross mark with reversed order of geometry (b) on the upper imprints of the cross mark(c) at Serial No. 4.

vii. The other three faint cross mark impressions i.e. lower one (Fig.2.d.) existing against serial number 4 and remaining two cross mark impressions (Fig. 2.e. & f.) just below the columns of the questioned ballot paper were possible resultant outcome of manner of handling, folding and related adjustment as well as some degree of relative lateral and vertical motion on the layers of the sheet consequent upon the folding attempts prior to the final folding of the ballot paper.
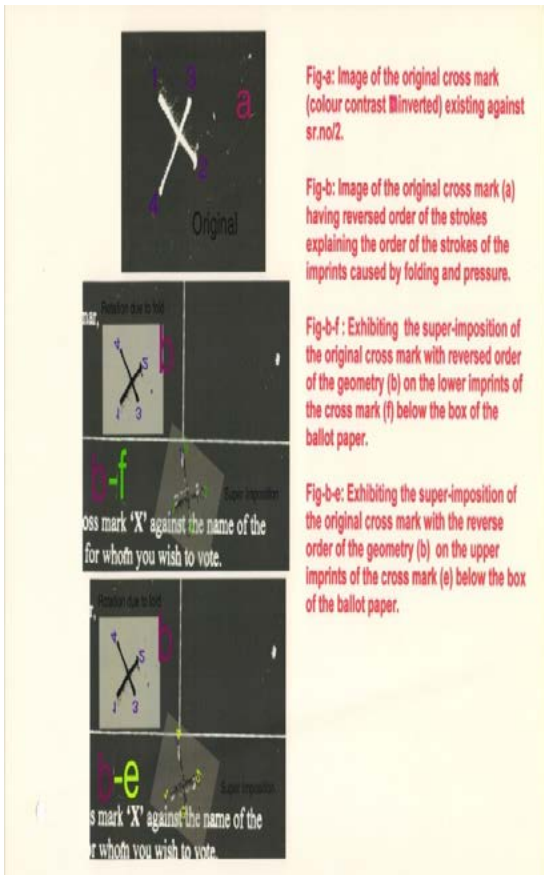

Fig-a: Image of the original Cross mark (colour contrast inverted) existing against Sr.No.2.

Fig-b: Image of the Original Cross mark having reversed order of the strokes explaining the order of the strokes of the imprints caused by folding and pressure.

Fig-b-d: Exhibiting the super-imposition of the original cross mark with reversed order of the geometery (b) on the lower imprints of the cross mark (d) against sr.no.4

Fig.4. a. Image of the original cross mark (colour contrast inverted) existing against Serial No. 2.

b. Image of the original cross mark having reversed order of the strokes explaining the order of strokes of the imprints caused by horizontal folding and pressure

b-d. Exhibiting the superimposition of the original cross mark with reversed order of geometry (b) on the lower imprints of the cross mark(d) at Serial No. 4.

viii. The impressions of the cross mark against serial number 4(Fig. 1 cross mark 'c &'d') and below the columns of questioned ballot paper (Fig.1 cross mark 'e' & 'f') had reversed order of strokes of the original cross mark 'a' existing at serial number 2 (Fig. 3.a, Fig.4.a, Fig.5.a), and the same image of cross mark 'a', when horizontally flipped, the similar order had been followed(Fig.3.b, Fig.4.b, Fig.5.b) and the same tallied with the cross mark impressions/ imprints on superimposition one by one (Fig. 3.b-c; 4.b-d; Fig.5. b-e; b-f).

Fig.5. a. Image of the original cross mark (colour contrast inverted) existing against Serial No. 2.

b. Image of the original cross mark having reversed order of the strokes explaining the order of strokes of the imprints caused by horizontal folding and pressure.

b-f. Superimposition of the original cross mark with reversed order of geometry (b) on the lower Cross mark imprint (f) existing below the column of ballot paper.

b-e. Superimposition of the original cross mark with reversed order of geometry (b) on the upper cross mark imprint (e) existing below the column of ballot paper.

The objective and critical analysis, evaluation and interpretation of the aforesaid observations infer that these faint multiple impressions/ imprints(Fig.1. cross marks 'c' & 'd' ; cross marks 'e' & 'f') were direct outgrowth and progenies of the original iconic symbol i.e. cross mark 'a' existing against serial number 2(Fig.1.a) in the column 'Mark Showing the Voter's Choice' for the manifest reason that these subsequent faint imprints of cross marks i.e. (Fig. 1. cross marks 'c' & 'd') existing against serial number 4 and below the column of ballot paper (Fig. 1. cross marks 'e' & 'f') tallied with the corresponding original cross mark 'a' against serial number 2 (Fig.1.a) on superimposition establishing the fact that the original inked cross mark put in the column "Mark Showing the Voter's Choice" against serial number 2 (Fig. 1. cross mark 'a') of the questioned Ballot Paper had resulted in its faint multiple impressions/ imprints of variable intensity and diffuse quality against serial number 4(Fig. 1. cross marks 'c' & 'd') and below the block of ballot paper(Fig. 1. cross marks 'e' & 'f'), due to unusual handling, folding, lateral and vertical motion of layers of sheet caused by intermittent and casual emphasis and pressure during the process of folding attempts followed immediately after putting the cross mark against serial No. 2.

Discussion

The study elucidates an unusual case of document examination where the document examiners make use of computer software tools such as Adobe Photoshop, scientific Tools/Equipments coupled with a continuous thought process of applying the mental faculties to plan a set of examination pattern to reveal the hidden truth. The science of handwriting proceeds on the basis of experience and observations. Science must be based on reasons and reasons must be capable of being stated and evaluated [4][8]. Therefore, the professional acumen, experience and competence of the document examiner always play a vital role revealing the truth through innovative skills, continuous thought process, objective interpretation of

data along with technological know-how in all these document problems [3][8]. Many times, ascertaining a document's authenticity or its fraudulent nature only requires a careful consideration and correlation of all or a number of various attributes that make up a document [7].

The fact that marks and traces have been deposited on a document by chance does not necessarily lessen their value; rather, circumstances peculiar to the particular problem are the controlling factors. Their recognition and identification through careful study and treatment, however, are essential if the investigator is to reveal facts that, weighed in relation to other aspects of the document, determine the true importance of the evidence [1]. It is also recommended that these examinations must be conducted on original documents. Also, with this kind of study, questioned document examiner may also through some light on the sequence of folding pattern of the sheet of the document if the same is having any dispute of this kind and data embodied in the document is suitable and sufficient for analysis.

Conclusion

It is not enough to take a document at its face value; it must be studied in great detail, bearing in mind disputed facts which may be proved or disproved, and engaging the mental faculties to bring out all those aspects which expose the fraudulent production of the document [6] and Suffice it to say, with such kind of unusual document problems, an examiner is constantly challenged as to the adequacy of his/her knowledge [3]. It is therefore imperative for the document examiner to keep abreast of the latest technology and scientific advancement in the field- as well as its possible use in the perpetration of crime- in order to meet the challenges of the future [6]. Regardless of how a document is manipulated- it is vital to those who stand to be defrauded that all of the evidence contained within the document itself be brought to light. The need to establish that a document has been modified may involve a complex set of studies. All potential tests for showing that something has been modified in any way must be applied by the document examiners [1]. Any lagging behind or ignoring of any aspect may risk limiting their capabilities and reducing the opportunities for growth and simultaneously will deprive society of the truth and facts of great evidentiary value [6].

Acknowledgement

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Safe City for Women

Ankita Singh[1]
Shambhavi Singh[2]
Ashish Tiwari[3]

The Indian Police Journal

ABSTRACT

Despite significant economic progress made by India, crime against women has seen a consistent rise. To help girls and women realise their true potential and engage in economic activities, a safer and secure environment has to be provided. This paper talks about inclusive infrastructure design in city planning or upgrading existing city infrastructure to deliver safer cities. As India progresses economically, more cities are going to be created via migration or urban planning. Hence, it is an opportunity to relook at our existing urban planning designs along with sustained and focussed implementation of laws to provide a holistic approach. We call such cities 'Safe City for Women' in this paper and the paper discusses various ways such as better planning of street lights, increasing porosity, safer and accessible public transportation, thoughtful public toilets. use of technology, education of women ,laws etc. through which it can be achieved.

Key Words: Safe city, women safety, crime against women, urban planning, Dark spots, porosity, Land use, public transport, inclusive infrastructure, women's rights, gender stereotypes, use of technology, education of girls, policies at workplace.

Introduction

Almost one quarter of girls aged 15 to 19 worldwide (approximately 70 million) report being victims of some form of physical violence since age 15.Around 120 million girls under the age of 20 worldwide (about 1 in 10) have experienced forced intercourse or other forced sexual acts, and one in 3 ever-married adolescent girls aged 15 to 19 (84 million) has been the victim of emotional, physical or sexual violence committed by their husbands or partners.

Data suggest that in some countries, as many as seven in 10 girls aged 15 to 19 who had been victims of physical and/or sexual abuse had never sought help: many said they did not think it was abuse or did not see it as a problem.

Worldwide, more than 700 million women alive today were married before their 18th birthday. More than one in three (about 250 million) entered into a union before age 15.The data reveal damaging perceptions on the acceptability of violence, particularly among girls. Globally nearly half of girls aged 15 to 19 believe a man is justified in beating his wife or partner under certain circumstances such as refusing to have sex, leaving the house without

Author's Introduction:

1   Joint Commissioner Income Tax, Lucknow.
2   MA (Pol. Sci.), JNU.
3   SSP, Firozabad, U.P.

permission, arguing, neglecting the children or burning the dinner.[1]

According to the World Health Organization, one in three women experienced some kind of physical or sexual assault[2]. It is only natural for women to have suppressed and internalized deep emotional and psychological trauma, given the high rate of incidents globally. This kind of uninterrupted and strong tension has impaired their mobility for a long time and stopped them from realizing their true potential, hampering not only at the personal level but for communities and economies as a whole.

Despite lots of progress, gender related issues like gender disparity, crime against women and gender selection are still prevalent in many countries. Women are still confined in many ways to the confines of their homes, with no room for them in society. In many countries, if a woman even dares to appear in public by herself, she is considered unvirtuous[3](and a victim of abuse or worse). Even in cosmopolitan, bustling urban centers like Bombay, "women are at best commuters through public space – moving from point A to point B – they cannot lay claim to the city as

citizens," says Shilpa Phadke, Shilpa Ranade and Sameera Khan in their book 'Why Loiter?: Women And Risk On Mumbai Streets'.[4]

The repercussions go beyond the physical and psychological effects on assaulted individuals. Harassment and fear of violence can hamper girls' and women's freedom of movement and stop them from reaching their full potential, socially and economically. "When women are afraid," says Laura Somoggi, who runs the Womanity Biennial Award for the Prevention of Violence Against Women, "it could threaten their ability to work or go to school or university, undermining their empowerment, their rights."[5]

As for India, the nation's Gender Gap Index (GGI) ranking in the 2018 World Economic Forum (WEF) was a dismal 108, the same as it was in 2017.[6,7] GGI is an index designed to measure gender equality among countries and relies on the study of four pillars– economic participation and opportunity, political empowerment, education, and health and survival. India needs to perform across all these pillars to achieve a significant ranking, with economic participation being of utmost importance since it directly impacts the GDP of the country.

Fig.1 Comparative rate of violence against women in Indian states and union territories in 2012, based on crimes reported to the police. Crime rate data per 100,000 women in this map is the

broadest definition of crime against women under Indian law. It includes rape, sexual assault, insult to modesty, kidnapping, abduction, cruelty by an intimate partner or relatives, trafficking, persecution for dowry, dowry deaths, indecency, and all other crimes listed in Indian Penal Code[8]

Crime Against Women In India, 2007-16

Cases per hour

Cases per hour

Fig 2. Crime against women in India, 2007-16

Crime Against Women: 2016 Had Lowest Conviction Rate In Decade
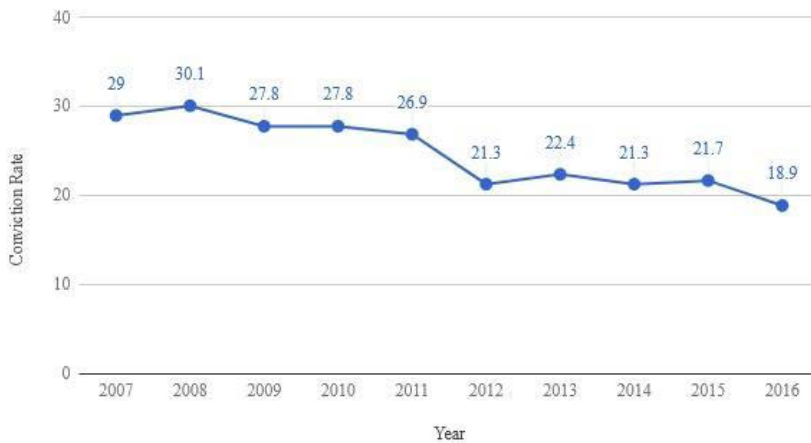
Source: National Crime Records Bureau 2016; Previous Publications

Fig 3. Conviction rates in crime against women from 2007-16

For economic progress to drive gender equilibrium, it is crucial that our' growth engines'–our cities–become healthier, safer and more comfortable for women. In 2012, in the nation's capital city of Delhi, the brutal ' Nirbhaya' gang rape caused outrage not only in India but around the world, prompting the government to amend anti-rape laws.[9]

Unfortunately, these legislative amendments have not so far stopped or reduced the violence women face in public spaces. Violence against

women and girls continues to plague our highways, public transport and even leisure areas. The number of actions of gender-based abuse in public places—ranging from non-physical intimidation such as making lewd comments, offensive looking or gesturing, to physical intimidation such as molestation, physical assaults (acid attacks, etc.) and rape.

In 2018, annual survey by the Thomson Reuters Foundation titled"The World's Most Dangerous Countries for Women" –identified India as the world's most dangerous country for sexual violence against females.[10] The survey caused a lot of uproar among the public who challenged its methods, yet it is no longer possible to ignore in India that women's safety is a big issue that needs immediate attention, which reported that 50 percent of people in Delhi and 21 percent in Mumbai thought women were not protected in the respective cities.[11]

How City Planners Can Help

In India, historically, urban planning–a prerogative of architecture and infrastructure–has never been synonymous with health, which is primarily a question of law and order. Furthermore, by implementing and promoting sustainable structures, urban planners play an important role in developing healthier communities.

It is well-documented that urban areas with no or inadequate streetlights are prone to crime.[12] Well-lit streets provide users, especially pedestrians, with a safer environment. This correlation between insufficient street lights and gender violence became popular when, during the economic recession of 2008, several cities in the United States decreased street lighting as a cost-saving measure. The unexpected consequence of this marginal reduction was the disproportionately high and detrimental effect that it had on the safety of women. During that time several cities saw an increase in the incidence of gender-related violence and harassment.[13]

Dimly lit roads have been commonly cited as a major cause of concern for women's safety in Indian cities, with regular reports of incidents in metropolitan areas such as Bengaluru, Mumbai, Chennai and cities such as Trichy and Bhopal. While there are no studies or analyzes available yet to estimate the extent of this problem nationally, more than 7,000'dark spots' (spots with low visibility or poor lighting) were recognized by the state government in Delhi in 2016.[14]Increasing visibility is important to reduce gender-related and other crimes in public spaces.

In her book, The Death and Life of Great American Cities, published in 2019, the American-Canadian author and writer Jane Jacobs introduced the concept of' social surveillance,' or what she described as' eyes on the road.' Jacobs recommended a simple model of ensuring diverse land uses within a public space, allowing more people to move around freely and keeping an eye on what's happening around them. A thriving urban area, she says, is one where, despite being with strangers, people feel safe in public spaces.[15]

To create natural surveillance, our communities need to promote street activities and porosity. Distributing land-use so that streets are lined with a healthy number of shops, restaurants and leisure places—such as libraries and seating areas—would ensure people are using them. Cities should also provide the informal sector with legitimate space and conveniences, such as hawkers, auto-rickshaw stands, and so on, to facilitate public participation. Porosity can be created by, among other things, limiting the heights of boundary walls, making houses and gates face the roads.

Public Transport

Public transport is important to economic development, and can also be made safer. The survey for 2011 reports that 45 percent of women do not use motorcycles, taxis, trains or private vehicles for work–that is, they walk. While officials and analysts agreed that only 18 percent of Indian bus users are women. Safe commuting is vital to giving girls and women access to education, employment and health care. It remains, however, a much-neglected field with few details and few regulations, policies and programme to tackle it.[16]

Mobility is increasingly transformed in Indian cities by technology-enabled shared mobility companies operating in taxis, auto-rickshaws, ride-sharing, carpools, and transportation spaces for employees.[17] The provision of safe, inclusive and convenient public transport and para-transit services, which are also cost-effective, will go a long way towards increasing the participation of women in the workforce, even as it would promote the use of efficient mass transit within Indian communities.

Highlighting the need for a gendered approach to public spaces, a survey conducted in the 1990s in Vienna prompted urban planners to reconsider their approach to inclusive infrastructure design.[18]People were asked about their use of public spaces and gender diversity was demonstrated by the findings. It was revealed, for example, that women needed more space to feel comfortable thus making a case for increasing the width of footpaths. Separate toilet facilities at markets and transportation hubs in Bangladesh resulted in an increase of more than 50 percent among women working in construction projects.[19]

Regrettably,most of the public infrastructure is built for use by an ordinary, well-bodied young person. Once infrastructure is built to accommodate women, it would become far more inclusive and support a larger category of people, such as senior citizens, children and a large portion of the disabled population.

Stronger Laws and Responsive Enforcement

While constructing and organizing public spaces can largely support crime prevention, the way a community reacts to an unexpected occurrence can set an example, and from the viewpoint of women's safety, directly impact future events.

Conviction rates for crimes against women are 19 percent, while India's average overall crime conviction rate is 47 percent.[20] Survivors of sexual or physical attacks in public or private environments are uncertain and confused about police and justice procedures, disciplinary nature, duration of court and the social stigma applied to them. We need a robust and rapid recording and handling mechanisms for these problems.

The government has to ensure enforcement of the legislation in effect. What's the point of having women's rights laws when the programme is oppressive and inhibitory? There needs to be an infrastructure upgrade to protect women's rights. Half of the Nirbhaya Fund lies unused despite the desperate need for effective helplines, fast-track courts, sensitive judicial officers, widespread and high-quality one-stop crisis centers and shelter houses, and funding programme to educate and advocate women's rights.[21] Police will ensure that police stations allow women's places to complain. Also, official statistics on crime against women are seriously underreported does not represent anyone well. Suppressing such grievances further weakens the mechanism, emboldening the perpetrators.

The second feasible move is to provide meaningful redress of crimes against women

and girls. They need to deal sensitively with allegations to ensure that offenders are prosecuted fairly and adequately under legislation such as the POCSO Act, which was expressly enacted for crimes against children. Finally, we need to discourage abuse and violence. To create a safer world for our children, we must challenge patriarchal mindsets, crack gender stereotypes and question traditional power structures. We cannot afford to leave our girls behind, cowering and scared all the time about their safety.

In our communities, men and women use spaces differently-be it public, private or transitional. We must therefore step away from the notion that what works for men should work for women as well. It is critical that urban planning and compliance go hand-in-hand to build a safe community. Simple measures such as moving a bus stop to a safer location by a few meters, installing street lamps in an isolated stretch or building safe, clean and usable public toilets at regular intervals will significantly improve the safety and accessibility of women in Indian towns.

Organizations such as 'Safecity'[22] continue to shine a light on this issue by seeking to crowdsource anonymous sexual violence stories and using them to involve people, neighborhoods and organizations in finding local solutions to this problem. Breakthrough[23] and Point of View use pop culture to change human rights, feminism, and intersectional perceptions and mindsets. Majlis provides survivors with free legal aid, and Prerana works to end inter generational prostitution and to protect women and children from human trafficking threats.[24]

Innovations

Kalpana Viswanath co-founded SafetiPin[25] in 2013, an app that aims to help women stay safe by allowing users to rate streets and areas for safety criteria such as lighting, visibility, the density of people, diversity of gender, security and transportation. It also aggregates safety data for use by local authorities and planners, partially generated by its users. SafetiPin now has 51,000 data points for Delhi alone, and offers "safest routes" to users, helping them to safely navigate the city. The role of the app lets women track their journey with someone they trust.

SafetiPin's crowdsourced data is augmented using photography to help make the App's data comprehensive. "We use a device in a moving car's windscreen that takes photographs automatically every 50 meters," says Viswanath. "We map the entire city using images and add user data to it." Google Earth and Street View are also used for additional insights, but SafetiPin data is complex, says Viswanath, reacting to a constantly changing environment.

Education

Over the years, the world has seen significant progress but there is one area that still leaves much to be desired: the education of women. Women across the globe continue to suffer from extreme examples of patriarchal societies that prohibit them from having the same educational opportunities as their male counterparts. Deep-rooted patriarchal mindsets fail to change and continue to hold girls accountable for attacks and violence for their safety. At the same time, we must challenge the notion that girls 'health implies protectionism. It is unacceptable and unjust to girls the paternalistic ideas such as keeping girls in families, having them chaperoned at all times and marrying them off early.

That citizen has to decide and agree affirmatively that each person has the right to be healthy. Our constitution states that before the law, every citizen is equal. So why not

reflect it in practice? Women and girls must have access to education, healthcare, career choice, and choice of a marriage partner or the right to remain single.

In short, their rights must be respected and allowed to be exercised. Education in this regard is the need of the hour to resolve taboos' problems, and also to help men in the country recognize dignity, limits, and consent so that women's rights are not violated. As people, citizens should support each other; be active observers to prevent sexual harassment and intervene when they see it happening and - most importantly-do not do it.

Policies in Workplace, Urban and Rural

Not only corporate, but local businesses should play their part by ensuring that they have effective policies for coping with workplace sexual harassment. They also need to concentrate on their organizational culture to prevent a hostile female work environment. When their workers can interact easily with each other without breaking consent laws or playing power games, it is a perfect investment for the future.

The Way Forward

Pink outposts-Exclusive women police outposts for facilitating filing of complaints by women.
Pink toilets
Improved public transport services for women
Exclusive women's power line with a single emergency number.
Integrated smart control room(Police, municipal bodies, city transport authorities)
Night patrol of women police
Women help desks in all police stations
CCTV cameras
Safety measures on buses.

Augmenting existing Asha Jyoti Kendra.
Improving street lighting.
Gender sensitization awareness campaigns.
Do`s and don'ts painted on walls in villages/cities.
Commercials/Short Films to be aired on LEDs fixed on vans parked in important places telling children about GOOD touch and BAD touch.
Revolving fund of 30,000 pm per police station for Jan Sunwai (grievance redressal)/community policing by police personnel.
GPS tracking
Panic button
Escorting of women in danger to be done by UP 112
Training of women constables who would now be manning the PRVs
Self-defence classes/Unarmed combat classes.
Women protection squads
A female officer as nodal officer for women-related crimes.
Take data from emergency control room and identify hotspots related to crime against women.
Curb on the selling of pornography.
Meeting with representatives from public transport private buses/auto drivers.
Police station-wise list of rape victims, analyze their life threat and provide them security.

Conclusion

The worst aspect of the crime against women is that it is not only the physical violation of the victim but an intrusion into her mental, psychological and emotional sensitivities. In a large and complex country like India, the dimensions and problems of violence against women do not yield easy solutions. Setting the standards is the first step, and while it is an

important and necessary one, it is not enough.

There must be effective implementation at the national, regional and international levels. The rule of law and recourse to legal remedies for violation of rights and entitlements must be observed. The Indian constitution which is the fundamental law of the land contains several provisions for the benefit and protection of women. The concept of equality and non-discrimination finds its due place in the Indian constitution. Besides, it also enables the state to adopt measures of affirmative action.

Apart from fundamental rights, some specific provisions to ensure the rights of women have also been incorporated in Directive Principles of State Policy. However, despite constitutional protection and several legislations, gender discrimination and injustices continue to occur. To effect a change in both consciousness and behavior, responses to violence against women must be implemented at the community, municipal, national and international levels, so that a "community-based response" involves not just local, but regional and international communities as well.

As Mahatma Gandhi has said that, 'be the change you want to see.' By following this, we can end the horrific violence against women and girls, and make the world a healthier, fairer, and more prosperous place for all.

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Precursor Chemicals: Trends, Patterns and Challenges in India

Dr. Karuna Dasari Subramanyam[1]
Dr. Rajender Pal Singh[2]
Dr. Harshad Thakur[3]

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Abstract

The precursor chemicals crimes are an on-going debate in the contemporary world. These crimes have blown out of proportion and assumed serious problems in India as well. The problem seems to be extended in the regions of North-East, North-West and South-West of the country. These problems are about special precursor chemicals that are Acetic anhydride, Ephedrine and Pseudoephedrine.The objective of the study is to explore the precursor chemicals crimes in India. Through this paper, an attempt has been made to address the trends, patterns and challenges of precursor chemicals in our country. The present study is based on exploratory research design. The data sources from the Narcotics Control Bureau (Annual Reports), Ministry of Home Affairs, Government of India. The data has been analyzed statistically between the years 2011 and 2017. The strict controls and monitoring of the sale, purchase, storage etc.,of certain precursor chemicals, there was evidence indicating their diversion of the controlled substances.Based on the findings, the researcher has addressed the recent trends, patterns and challenges that indicate, synthetic drugs replacenatural and semi-synthetic drugs.Hence, coordination and concerted efforts are the need of the hour to counter effectively the misuse and abuse of precursor chemicals in India.

Key Words: Precursor Chemicals, Trends, Patterns, Challenges and India.

Introduction

Precursor Chemicals or Controlled Substances come under the Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 of the Regulation of Controlled Substances (RCS) Order, 2013. The Precursor Chemicals regime is paradoxical in the reuse that is functioning in legitimate and illegitimate ways. These are chemical compounds that might be utilized in the production of illicit Narcotic Drugs and Psychotropic Substances.

The regulation of Narcotic Drugs at the International level started in 1961 with the adoption of the first United Nations Convention which once in Narcotic Drugs based essentially on derivatives natural subsequently with rebound Psychotropic Substances need was filet derivate to regulate Psychotropic Substances to which led to an other International Convention, that is, the convention on Psychotropic Substances, 1971. Notably in the two United Nations Conventions,

Author's Introduction:

1   Doctoral Research Scholar, School of Law, Rights and Constitutional Governance, Tata Institute of Social Sciences, Deonar, Mumbai – 400088.
2   Director General of Police, Economic Offences Wing & Special Investigation Team, Lucknow, Uttar Pradesh –226010.
3   Director, National Institute of Health and Family Welfare, Munirka, New Delhi – 110067.

there were no references related to Precursor Chemicals or Controlled Substances. However, within the International Society Narcotic Drugs and Psychotropic Substances are becoming profitable and effectively involving many societies. The international community decided to have another convention to focus on illegal smuggling of Narcotic Drugs and Psychotropic Substances and promote internal cooperation for the sales. The reason is also that there are drugs and chemicals which are essential for Industry and Medical purposes. They may be useful as starting materials for many reactions and synthetic handles to generate complexity from simplicity. In addition, for regular laboratory work of science graduate students' complete termination of these chemicals is highly uncalled for. The number of countries also to have control manufacture, sale, purchase, storage of such chemicals and henceforth precursor chemicals forms the background for adopting the convention against illicit traffic in Narcotic Drugs and Psychotropic Substances, 1988. The United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988 referred to twenty-nine precursors (INCB-Precursors, 2019) as the chemicals that should be controlled (see Annexure - I).

In India, the Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 was framed taking into account India's obligations under the three United Nations Conventions 1961, 1971 and 1988 as well as Article 47 of the Constitution of India was taken into account. The guidelines states that the "*state shall endeavor to bring about prohibition of the consumption, except for medical purposes, of intoxicating drinks and of drugs which are injurious to health*". The act prohibits,expect for medical or scientific purposes, the manufacture, production, trade, use and so forth of Narcotic Drugs and Psychotropic Substances. Unlike the earlier Opium Act,

1878 and the Dangerous Drugs Act, 1930 which it replaced is the Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 which came into effect from 14th November, 1985 and expressly provided constitution of a central authority to exercise the powers and functions of the Central Government under the act. In exercise of these powers, the Narcotics Control Bureau (NCB) was constituted with Headquarters at New Delhi with effect from17th March, 1986.

The controlled substances are brought into Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 of the Regulation of Controlled Substances (RCS) Order, 1993 due to their utilization in unlawful manufacturing of different medications. According to NDPS Act, 1985 of Section 2 (viid) *any substance which the Central Government may, having regard to the available information as to its possible use in the production or manufacture of narcotic drugs or psychotropic substances or the provisions of any International Convention, by notification in the Official Gazette can be declared to be a controlled substance* (NDPS-Act, 1985).

According to Regulation of Controlled Substances (RCS) Order, 1993 (i) Every person who manufactures, distributes, sells, imports, exports or consumes any controlled substances shall maintain daily accounts of his activities in *Form 1 or Form 2,* as the case may be. (ii) A consignment of controlled substances shall be moved from one place to another place only when consignment note accompanies it in *Form 3.* (iii) Every person mentioned in clause 3 of this order shall send the quarterly return by a registered post in *Form 4 or Form 5*, as the case may be, to the concerned Deputy Director, Narcotics Control Bureau, whose address is given in the Form. The quarters of this purpose shall be January to March, April to June, July to

September and October to December. The return shall be dispatched before the last day of the month following the quarter. *Form 1* deals with the Register of manufacture of controlled substances, *Form 2* deals with the Register of consumption, sale, import or export of controlled substances, *Form 3* deals with Consignment note (To accompany a consignment of controlled substances), *Form 4* deals with Quarterly return of manufacture of a controlled substance and *Form 5* deals with Quarterly return of receipt, import, sale, consumption or export of controlled substance (RCS, 1993).

The Narcotic Drugs and Psychotropic Substances (NDPS) Act,1985 of the Regulation of Controlled Substances (RCS) Order, 2013 replaced the Regulation of Controlled Substances (RCS) Order, 1993 for better regulation and control of Controlled Substances within India which plays a vital role in manufacture and production of Narcotic Drugs and Psychotropic Substances. It was found that there was no proper reporting of the use of controlled substances as per the RCS order, 1993. The user of precursor chemicals returns was found to be manipulated and forged in many cases. The many users of precursor chemicals avoided filing the returns as per RCS order, 1993 knowingly and unknowingly. Now the Regulation of Controlled Substances order, 2013 the controlled substances are divided into three categories; *Schedule-A* deals with Prohibition of manufacture, distribution, sale, purchase, possession, consumption, transport and destruction of controlled substances. *Schedule-B* deals with the Export of controlled substances and *Schedule-C* deals with the Import of controlled substances. However, India has notified seventeen precursor chemicals as controlled substances based on the possibility of abuse within the country.

Schedules

According to the Narcotic Drugs and Psychotropic Substances(NDPS) Act, 1985 of the Regulation of Controlled Substances (RCS) Order, 2013 the controlled substances are divided into three categories; Schedule A, B and C. The list of substances is given in (see Annexure–II).

- *Schedule –A:* Five substances whose Manufacture, Distribution, Sale, Purchase, Possession, Storage and Consumption are subject to controls exercised by Narcotics Control Bureau(NCB), Internal Security Division - II, Ministry of Home Affairs, Government of India.

- *Schedule – B:* Seventeen substances including five substances of Schedule – A, whose export from India is subject to control by Central Bureau of Narcotics (CBN), Department of Revenue, Ministry of Finance, Government of India.

- *Schedule –C:* Seventeen substances including five substances of Schedule – A, whose import into India is subject to control by Central Bureau of Narcotics (CBN), Department of Revenue, Ministry of Finance, Government of India (AR-NCB, 2016).

Statistical Analysis

India has notified seventeen precursor chemicals as controlled substances as per the Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 of the Regulation of Controlled Substances (RCS) Order, 2013. Amongst seventeen substances this research paper will discuss only five substances (Schedule - A).The five substances whose manufacture, distribution, sale, purchase, possession, storage and consumption are subject to controls exercised by Narcotics Control Bureau (NCB), Internal Security Division - II, Ministry of Home Affairs, Government of India.

Table. 01. Details of Five substances seizures and cases in India from 2011 to 2017.

Five substances (Schedule - A)		2011	2012	2013	2014	2015	2016	2017
Acetic anhydride	Seizures	62	363	243	54	4	2661	25
	Cases	3	3	7	2	1	1	2
N-Acetylanthranilic acid	Seizures	0	0	0	0	0	0	0
	Cases	0	0	0	0	0	0	0
Anthranilic acid	Seizures	0	0	0	0	0	0	0
	Cases	0	0	0	0	0	0	0
Ephedrine & Pseudoephedrine	Seizures	7208	4393	6655	1330	827	21272	2990
	Cases	20	17	66	44	19	17	26

Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p.80 and 2016, p.82 and 2015, p.65.

The statistical data of seizures and cases of five controlled substances (see Table 01). Among the five substances, mainly three substances were found to have more seizures and cases. In the remaining two substances, there were no seizures and cases as per statistical data released by the Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Acetic anhydride, Ephedrine and Pseudoephedrine is more potential and produces a large number of pharmaceutical products;they are needed in medicine and are export revenue purpose. Acetic anhydride was utilized for the illegitimate production of Morphine into Heroin. Ephedrine and Pseudoephedrine are utilized for the illegitimate production of Methamphetamine.

Objective

The objective of the study is to explore the precursor chemicals crimes in India. Through this paper, an attempt has been made to address the trends, patterns and challenges of precursor chemicals in our country.

Methodology

The present study is based on exploratory research design. The data sources from the Narcotics Control Bureau (Annual Reports), Ministry of Home Affairs, Government of India. The data has been analyzed statistically from the year 2011 to 2017.

Results and Analysis

Ephedrine and Pseudoephedrine

For centuries, the Chinese have made a medicinal or therapeutic tea from herbs called *Ma -Huang,* whereas American scientists classify it as the *genus ephedra.* Four species of ephedra are reported in India. Indian species are *Ephedra gerardiana* and *Ephedra major.* The plants are collected after attaining the age of four years for the extraction of alkaloids. The active ingredient in these herbs is called ephedrine (Ksir, Hart and Ray, 2008) and it is an alkaloid product. Chemically alkaloids are naturally occurring organic compounds that mostly contain basic nitrogen atoms and impart some physiological action. This group also includes some related compounds with neutral and even weakly acidic properties. Some synthetic compounds of a similar structure may also be termed alkaloids. Ephedra contains about 1 to 1.5% total alkaloids of ephedra calculated as ephedrine. The ephedra contains different alkaloids are as follows; ephedrine or *l*-ephedrine, L-methyl ephedrine, D-methyl iso-ephedrine, norephedrine and

dimethyl ephedrine. Ephedra is utilized for early relief of asthma, hay-fever and whooping cough (Gokhale, 1996).

Ephedrine mainly acts indirectly by releasing noradrenaline from sympathetic nerve endings and directly stimulates both the *alpha*(α) and *beta* (β) adrenergic receptors. Ephedrine crosses to the brain and causes stimulation, but the central nervous system and peripheral activity ratio are lower than amphetamine (Tripathi, 2009). Pseudoephedrine hydrochloride (Sudafed), a stereoisomer of ephedrine, it is used as a nasal decongestant. It is less liable to produce tachycardia, increase in blood pressure and central nervous system stimulation. Amphetamine is structurally related to ephedrine which is available in Racemic and Dextro forms. The d-isomer is approximately three to four times as potent as the Levo form in its central effects.

Ephedrine and Pseudoephedrine both have similar chemical structures. Pseudoephedrine is a stereoisomer of ephedrine. Ephedrine and Pseudoephedrine both have widespread legitimate use in the pharmaceutical industry, active pharmaceutical ingredients form and pharmaceutical preparations form. Historically, Ephedrine and Pseudoephedrine in active pharmaceutical ingredients form the preferred precursors; however,the strict controls in many countries,drug traffickers have diversified their approach and also diverted pharmaceutical preparations containing ephedrine or pseudoephedrine (AR-NCB, 2016).

Ephedrine structural similarity to Methamphetamineis used to access Methamphetamine using a chemical reduction in which ephedrine's hydroxyl group is removed. Henceforth ephedrine acts as a highly sought-after chemical precursor in the illicit manufacture of Methamphetamine. Usually, the most popular method for reducing ephedrine to Methamphetamine is similar to the Birch reduction using alkali metal and ammonia. As a phenethylamine, ephedrine has a similar chemical structure to amphetamines.

Figure. 01 Details of Ephedrine & Pseudoephedrine seized in India from 2011 to 2017.

Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p.80 and 2016, p.82 and 2015, p.65.

The quantity of Ephedrine and Pseudoephedrine seizures in India (see Figure 01) has fluctuated over the period 2011 to 2017 and the highest reported seizures in 2016 were 21272 kg. Ephedrine and Pseudoephedrine seizures in

2017 were 2990 kg. The comparative figures for the last seven years are given (see Figure 01). While there has been an increasing trend in the quantity of reported Ephedrine and Pseudoephedrine seizures in compared to the previous year, the amount of Ephedrine and Pseudoephedrine seized has decreased from 21272 kg to 2990 kg.
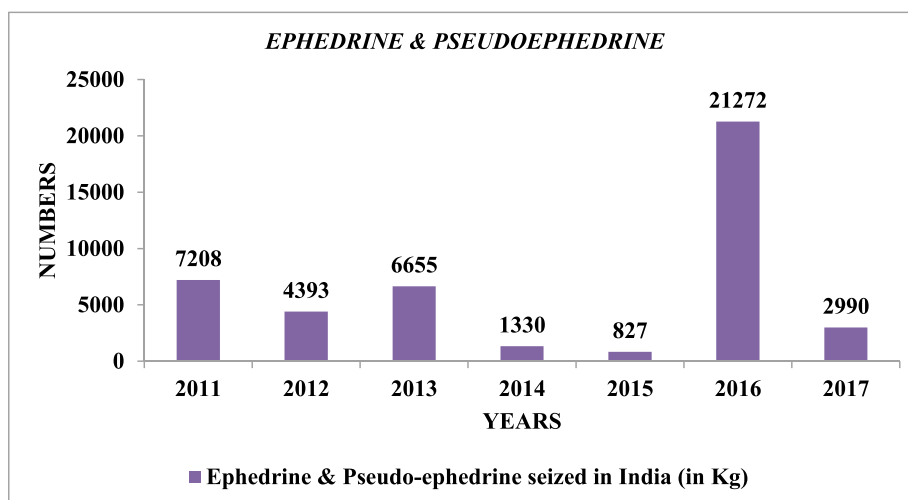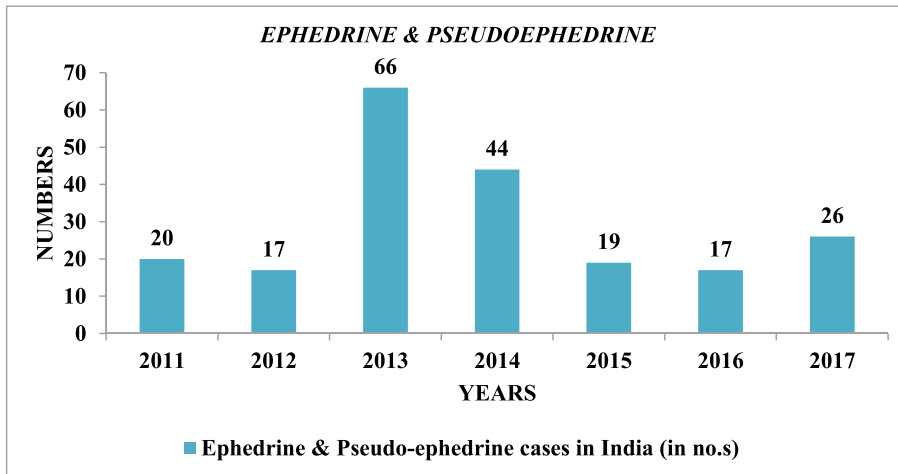

Figure. 02 Details of Ephedrine & Pseudoephedrine cases in India from 2011 to 2017.

Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p.80 and 2016, p.82 and 2015, p.62.

The number of Ephedrine and Pseudoephedrine cases in India (see Figure 02) has fluctuated over the period 2011 to 2017 and the highest reported cases in 2013 were 66.Ephedrine and Pseudoephedrine cases in 2017 were 26. The comparative figures for the last seven years are given (see Figure 02). While there has been an increasing trend in the number of reported Ephedrine and Pseudoephedrine cases compared to the previous year, the number of cases has increased from 17 to 26.

Table: 02 Details of Ephedrine & Pseudoephedrine Seizures, Cases and Arrests in Region-wise in India from 2015 to 2017.

Regions	Details	2015	2016	2017
North Region (NR)	Quantity	514.00	90.74	629.41
	Cases	10	3	6
	Arrests	14	3	9
East Region (ER)	Quantity	266.00	23.87	1429.01
	Cases	6	1	6
	Arrests	9	2	16
South West Region (SWR)	Quantity	46.83	21157.56	931.25
	Cases	3	13	14
	Arrests	2	21	13
Totals	**Quantity**	**826.83**	**21272.17**	2989.67
	Cases	19	17	26
	Arrests	25	26	38

Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p.84-85 and 2016, p.85-86 and 2015, p.66-68.

The number of Ephedrine and Pseudoephedrine seizures, cases and arrests in India has fluctuated over the period 2015 to 2017. The South-West Region seized more quantities of Ephedrine and Pseudoephedrine in 2016. The amount of Ephedrine and Pseudoephedrine was 21157.56kg and the seizure happened in Maharashtra, Madhya Pradesh and Karnataka. The suspected destinations of the seized chemicals were Mombasa, Kenya and Malaysia and South Africa. East Region seized the Ephedrine and Pseudoephedrine in 2017 and the amount of Ephedrine and Pseudoephedrine was 1429.01kg and the seizure happened in Assam and Mizoram. North Region seized the Ephedrine and Pseudoephedrine in 2017, the amount of Ephedrine and Pseudoephedrine was 629.41 kg and the seizure happened in New Delhi. Ephedrine and Pseudoephedrine seizures in 2017 were 2990 kg. The comparative tables for the last three years are given (see Table 02). While there has been an increasing trend in the quantity of reported Ephedrine and Pseudoephedrine seizures in comparison with the previous year, the quantity of Ephedrine and Pseudoephedrine seized has decreased from 21272 kg to 2990 kg. Ephedrine and Pseudoephedrine were seized in more quantity in the South-West Region than compared to the East Region and North Region. The reason behind that Maharashtra, Madhya Pradesh, Gujarat and Bangalore, highly industrialized states is because of their topography and location. Several important industries like chemicals, textiles and pharmaceutical companies are present.

The highest cases were reported in South West Region in 2017 and the number of cases was 14 followed by North Region in 2015 and the number of cases was ten and in East Region in 2017 the number of cases was six. Ephedrine and Pseudoephedrine cases in 2017 were 26. The comparative figures for the last three years are given (see Table 02). While there has been an increasing trend in the number of reported Ephedrine and Pseudoephedrine cases in comparison with the previous year, the number of cases has increased from 17 to 26. Overall, the number of Ephedrine and Pseudoephedrine related cases has increased in India.

The highest arrests were reported in the South West Region in 2016 and the numbers of arrests were 21 followed by the East Region in 2017 where the numbers of arrests were 16 and lastly in the North Region in 2015 the numbers of cases were 14. Ephedrine and Pseudoephedrine arrests in 2017 were 38. The comparative figures for the last three years are given (see Table 02). While there has been an increasing trend in the number of reported Ephedrine and Pseudoephedrine arrests in comparison with the previous year, the number of arrests has increased from 26 to 38. Overall, the number of Ephedrine and Pseudoephedrine related arrests has increased in India.

Acetic anhydride

Acetic anhydride has a dual purpose and they both have legitimate and illegitimate usage. India is one of the producers of acetic anhydride and china is the largest producer of acetic anhydride in the world. In India, it is mainly utilized by the pharmaceutical industry and textile industries (AR-NCB, 2017). The pharmaceutical industry, the legitimate use for the production of anti-pyretic tablets Aspirin and Paracetamol and the illegitimate use for the production of Heroin (Diacetylmorphine) and Methaqualone (Mandrax). In the industry sector, it is used in the textile industries to manufacture filter buds, cigarettes etc.

Figure. 03 Details of Acetic anhydride seized in India from 2011 to 2017.
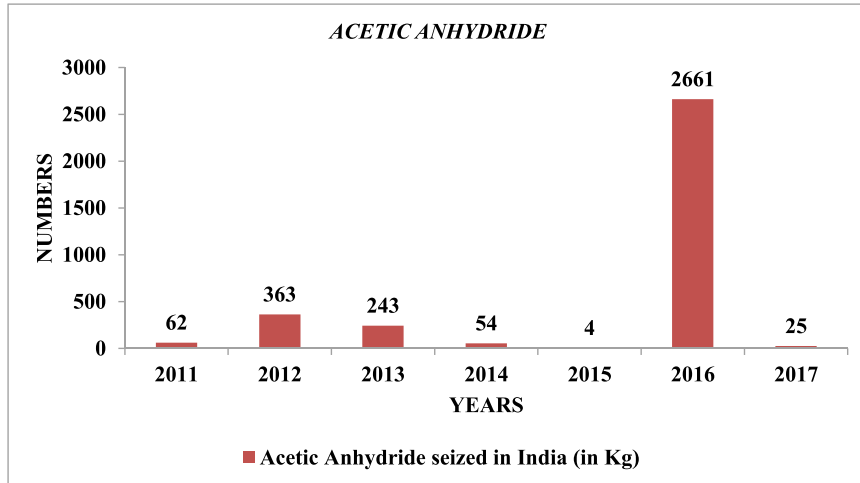
Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p. 80 and 2016, p. 82 and 2015, p. 65.

The quantity of acetic anhydride seizures in India has fluctuated over the period 2011 to 2017 and the highest reported seizures in 2016 were 2661 kg. Acetic anhydride seizures in 2017 were 25 kg. The comparative figures for the last seven years are given (see Figure 03). While there has been an increasing trend in the number of reported acetic anhydride seizures compared to the previous year, the quantity of acetic anhydride seized has decreased from 2661 kg to 25 kg.

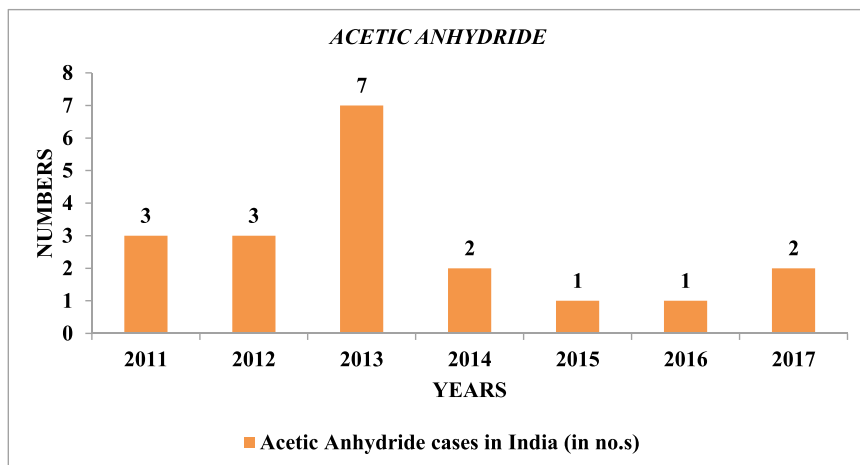**Figure. 04 Details of Acetic anhydride cases in India from 2011 to 2017.**

Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p. 80 and 2016, p. 82 and 2015, p. 65.

The number of acetic anhydride cases in India has fluctuated over the period 2011 to 2017 and the highest reported cases in 2013 were seven. Acetic anhydride cases in 2017 were two. The comparative figures for the last seven years are given (see Figure 04). While there has been an increasing trend in the number of reported acetic anhydride cases compared

to the previous year, the number of acetic anhydride cases has increased from one to two.

Table: 03 Details of Acetic Anhydride Seizures, Cases and Arrests in Region-wise in India from 2015 to 2017.

Regions	Details	2015	2016	2017
North Region (NR)	Quantity	3.50	2.00	0
	Cases	1	1	0
	Arrests	2	1	0
East Region (ER)	Quantity	0	0	24.80
	Cases	0	0	2
	Arrests	0	0	2
South West Region (SWR)	Quantity	0	2659.00	0
	Cases	0	0	0
	Arrests	0	0	0
Totals	**Quantity**	**3.50**	**2661.00**	**24.80**
	Cases	1	1	2
	Arrests	2	1	2

Source: Data released by Director General, Narcotics Control Bureau, Ministry of Home Affairs, Government of India. Annual Report - 2017, p.84-85 and 2016, p.85-86 and 2015, p.66-68.

The number of acetic anhydride seizures, cases and arrests in India has fluctuated over the period 2015 to 2017. The South-West Region seized more quantity of Acetic anhydride in 2016 the amount of Acetic anhydride was 2659.00 kg and the seizure happened in Maharashtra. In this operation, the State Police of Maharashtra coordinated with ATS Maharashtra, ATS Gujarat and FDA Solapur intercepted four vehicles and seized the Acetic anhydride. In East Region seized the Acetic anhydride in 2017 the amount of Acetic anhydride was 24.80 kg the seizure happened in Lalgola, Murshidabad and West Bengal. In North Region seized the Acetic anhydride in 2015 the amount of Acetic anhydride was 3.50 kg the seizure happened in Uttar Pradesh. Acetic anhydride seizures in 2017 were 25 kg. The comparative tables for the last three years

are given (see Table 03). While there has been an increasing trend in the quantity of reported acetic anhydride seizures in comparison with the previous year, the quantity of acetic anhydride seized has decreased from 2661 kg to 25 kg. Acetic anhydride seized more quantity in the South-West Region than compared to the North Region and East Region. The reason behind that is these Maharashtra and Gujarat are highly industrialized states because of their topography and location. Several important industries like chemicals, textiles and pharmaceutical companies are present.

The highest cases were reported in East Region in 2017 and the number of cases was two followed by the North Region in 2016 the number of cases was one and no case was registered in the South-West Region for the last three years. Acetic anhydride cases in 2017 were two. The comparative tables for the last three years are given (see Table 03). While there has been an increasing trend in the number of reported acetic anhydride cases compared to the previous year, the number of

cases has increased from one to two. Overall the number of acetic anhydride related cases has increased in India.

The highest arrests were reported in East Region in 2017 and the number of arrests was two followed by North Region in 2015 and the number of arrests was two and no arrests were registered in the South-West Region for the last three years. Acetic anhydride arrests in 2017 were two. The comparative tables for the last three years are given (see Table 03). While there has been an increasing trend in the number of reported acetic anhydride arrests compared to the previous year, the number of arrests has increased from one to two. Overall the number of acetic anhydride related arrests has increased in India.

Discussion

The precursor chemicals trafficking scenario in India is largely attributed to various internal and external factors. One of the internal factor influencing precursor chemicals trafficking in India is due to the production of a lot of synthetic drugs and precursor chemicals that are smuggled out of the country. The external factor is the prime geographical factors influencing India's drug situation as it is in close proximity to the regions of South West and South East Asia known as a *"Golden Crescent"* (Afghanistan, Pakistan and Iran) and the *"Golden Triangle"* (Myanmar, Laos and Thailand). India's geographical position makes it vulnerable to transit, trafficking and consumption of Narcotic Drugs, Psychotropic Substances, Precursor Chemicals and Pharmaceutical Products of various forms like Tablets, Capsules, Syrups and Injections.

The major trafficking of Acetic anhydride mainly takes place from North Region (*Uttar Pradesh* alone*)*, East Region (*West Bengal* alone), and South-West Region (*Maharashtra* alone). The major trafficking of Ephedrine and Pseudoephedrine mainly takes place from North Region (*New Delhi* alone*)*, East Region (*Assam* and *Mizoram,*) and South-West Region (*Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu,* and *Telangana*).

The tables and figures of seizures, cases and arrests related to Acetic anhydride, Ephedrine and Pseudoephedrine were found to be mostly in the part of South-West Region, Eastern Region and Northern Region such as Chennai Central Railway Station (*Tamil Nadu*), Trichy Airport (*Tamil Nadu*), Cochin International Airport (*Kerala*), Kempegowda International Airport Bangalore (*Karnataka*), Solapur, Thane, Navi Mumbai *(Mumbai)*, Ahmedabad (*Gujarat*), Neemuch, Mandsar (*Madhya Pradesh*), Murshidabad (*Kolkata*), Assam, Mizoram, Jodhpur (*Rajasthan*), Punjab, Himachal Pradesh and New Delhi.

The precursor chemicals are transferred from India to Myanmar to cater for the demands of numerous laboratories manufacturing that are Amphetamine Type Stimulants(ATS) and Heroin. The Moreh and Zokhawthar are infamous for being routes for smuggling of precursor chemicals from India to Myanmar. Ephedrine is diverted from factories in South India to Kolkata and Guwahati from where they are trafficked from India to Myanmar overland.

The redirection of controlled substances, particularly the Acetic anhydride, Ephedrine and Pseudoephedrine from licit to illicit channels has continued in India. There was an exceptionally large quantity of acetic anhydride seizures 8998 kg in 2018. The amount was substantially higher than the total seizures of acetic anhydride in the last seven years (25 kg in 2017, 2661 kg in 2016, 4 kg in 2015, 54 kg in 2014, 243 kg in 2013, 363 kg in 2012 and 62 kg in 2011). Of the total seizures of acetic anhydride in 2018, 8937 liters were confiscated in a single seizure effected in Noida and New

Delhi. The 1.8 tons of Pseudoephedrine were confiscated in Noida in a single seizure conducted on 11th May 2019.

Globally, the drug business turnover of around US $1000 billion. It is a major business in the world, illegal oil, arms and painting. There is a huge volume of money transactions underprocess in the dark scene of the Indian economy wherein drug smuggling plays an important part. These transactions produce a parallel economy, which is detrimental to the economy of the country. The illegal flow of drugs and chemicals violates India's economics and also poses a significant threat to national security and public health. The area of research is an on-going debate in the contemporary world; it has overlooked three extremely important points that illicit manufacture drugs, illicit drug trade and illicit financial flows. The first element is the *illicit manufacture* process of pharmaceutical medicines. Second, *illicit trade* process of wholesales and retails. Third, *illicit financial flows* of digital currency like bitcoin.

Conclusion

The strict controls and monitoring of the sale, purchase, storage, etc., of certain precursor chemicals, there was evidence indicating their diversion of the controlled substances. The law enforcement officers and other stakeholders should keep track of the current drug trafficking trends, patterns, and challenges of legitimate to illegitimate controlled substances. Based on the analysis, the researcher has addressed the recent trend that indicates that seizures, cases and arrests are increased. The ongoing trend phenomenal development of countless synthetic drugs of redirection precursor chemicals has fundamentally tested our comprehension of synthetic drugs. The ongoing pattern indicates the unlawful manufacture of synthetic drugs, for example, the issue of undercover research facilities fabricating Amphetamine Type Stimulates (ATS), New Psychoactive Substances (NPS), and Benzodiazepines. The ongoing challenges has emerged for monitoring drug detection and identification, legislative measures, and control of drugs. The complexity and diversity of controlled substances pose a significant challenge to law enforcement and international control efforts. Hence, coordination and concerted efforts are the need of the hour to counter the misuse and abuse of controlled substances effectively in India.

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Annexure – I.		
United NationConvention listed Precursor Chemicals		
S.No	**Table –I**	**Table –II**
1	Acetic anhydride	Acetone
2	N-Acetylanthranilic acid	Anthranilic acid
3	4-Anilino phenethylpiperidine (ANPP)	Ethyl ether
4	Ephedrine	Hydrochloric acid
5	Ergometrine	Methyl ethyl ketone
6	Ergotamine	Piperidine
7	Isosafrole	Sulphuric acid
8	Lysergic acid	Toluene
9	3,4-Methylenedioxyphenyl-2-propanone	
10	3,4-MDP-2-P methyl glycidate	
11	3,4-MDP-2-P methyl glycidic acid	
12	Norephedrine	
13	N-Phenethyl-4-piperidone (NPP)	
14	Phenylacetic acid	
15	*alpha*-Phenylacetoacetamide (APAA)	
16	*alpha*-Phenylacetonitrile (APAAN)	
17	1-Phenyl-2-propanone	
18	Piperonal	
19	Potassium permanganate	
20	Pseudoephedrine	
21	Safrole	
	The salts of the substances listed in this table, whenever the existence of such salts is possible.	The salts of the substances listed in this table, whenever the existence of such salts is possible.
Source:INCB- Precursors, 2019.		

		Annexure - II.	
		Regulated Controlled Substances.	
S.No	Schedule - A	Schedule – B	Schedule - C
1	Acetic anhydride	Acetic anhydride	Acetic anhydride
2	N-Acetylanthranilic acid	N-Acetylanthranilic acid	N-Acetylanthranilic acid
3	Anthranilic acid	Anthranilic acid	Anthranilic acid
4	Ephedrine and its salts	Ephedrine, its salts and preparation thereof	Ephedrine, its salts and preparation thereof
5	Pseudoephedrine and its salts	Ergometrine and its salts	Ergometrine and its salts
6		Ergotamine and its salts	Ergotamine and its salts
7		Isosafrole	Isosafrole
8		Lysergic acid and its salts	Lysergic acid and its salts
9		3, 4-methylenedioxyphenyl-2-propanone	3, 4-methylenedioxyphenyl-2-propanone
10		Methyl ethyl ketone	Methyl ethyl ketone
11		Norephedrine (Phenylpropanolamine), its salts and preparations thereof	Norephedrine (Phenylpropanolamine), its salts and preparations thereof
12		1-phenyl-2-propanone	1-phenyl-2-propanone
13		Phenylacetic acid and its salts	Phenylacetic acid and its salts
14		Piperonal	Piperonal
15		Potassium permanganate	Potassium permanganate
16		Pseudoephedrine, its salts and preparations thereof	Pseudoephedrine, its salts and preparations thereof
17		Safrole and any essential oil containing 4% or more safrole	Safrole and any essential oil containing 4% or more safrole
		Source: NDPS-Act, 1985.	

Workplace under the PoSH Act during the Pandemic: Have the Boundaries Changed

Dr Nidhi Saxena[1]
Dr Veer Mayank[2]

Abstract

Equality and non-discrimination are internationally recognized principles of 'human rights protection' embedded in the constitutions of many nations, including the Constitution of India, and are indispensable, in the workplace. The principles of equal opportunity, equal protection, and non-discrimination as basic human and labour rights are internationally recognised fundamentals for 'social justice and sustainable development. The right to live with dignity is recognised therewith as a basic human right to be employed in a protected and conducive work environment. Women, who play an equally vital role in almost all fields, walk with their shoulders next to men, and put effort in every endeavour are facing issues of the brutal attack on dignity when sexually abused or harassed at the workplace. Sexual harassment in the workplace has become a tool for preventing women from achieving their worth. Amidst the pandemic when there was a lockdown imposed in several places, the workplace has moved to the safe environment of the home. It was expected that the issue of sexual harassment would be resolved, yet it hasn't gone away and instead witnessed a notable increase in potential cases of online sexual harassment especially cyberbullying, cyberstalking, video calls, unwarranted messages, calls, in odd hours, etc. (Sharma, 2020). The number of registered cases of online sexual harassment with the NCW during the pandemic rose almost 5 times (Express News Service, 2021). During the lockdown, online media platforms were negatively exploited for the offensive and hostile communications with sexually coloured remarks towards women. In many incidents, an initial reporting was avoided, but the surge in such cases later flooded the news reporting. This initiated a debate to find whether work from home or online workplace also constitutes a workplace. With an argument that the workplace should be interpreted widely to include every place where women work for the organization, including cyberspace, the paper examines the applicability of "The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013" in the cases of sexual harassment occurring in cyberspace. The research paper conceptualizes cyber workplace, examines the existing laws and precedent with the available remedies therein; discusses the mechanism and the power of the internal complaint committee to deal with cases of cyber sexual harassment.

Key Words: *Workplace, PoSH Act, Recognised, Equality, Recognised Principal, Human Rights, Constitution, Internationally, International Labour Organisation(ILO)*

Author's Introduction:

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

Introduction

Labour is not a commodity (International Labour Organisation, 1944) and hence cannot be sold and bought on the basis of auctions or given to one who has made the lowest bids. The ILO Declaration of Philadelphia (ILO declaration) of 1944 (International Labour Organisation, 1944) affirms the underlined mission of ILO *inter alia* being the prevention of the commodification of labour. It also provides the objective on which 'International Labour Organisation' (ILO) was established i.e. 'all born man or human being irrespective of sex, race or creed has the right to pursue their spiritual development or material well-being under the conditions of freedom, right to live with dignity and must be provided with equal opportunity and economic security' (International Labour Organisation, 1944). These elemental rights guaranteed to labour across the world under the ILO convention form a part of the human rights and the abstraction of such rights would constitute a violation of human rights as are embedded in the UDHR ("Universal Declaration of Human Rights (UDHR), GA res. 217A (III), UN Doc A/810 at 71 (1948),").

The ILO declaration rests on two important principles - the principle of the certainty of human rights to social policy and the requirement of international economic planning. To ensure observance of human rights and equality in employment the ILO 'Declaration of Philadelphia'(International Labour Organisation, 1944), was followed by the Discrimination (Employment and Occupation) Convention, in 1958(International Labour Organization, 1958). This convention came with the objective of protecting all human beings from discrimination at work (International Labour Organization, 1958). The signatory nations are under an obligation to ensure protection against discrimination on the grounds of 'race, colour, sex, religion, political opinion, national extraction and social origin in employment and occupation' (International Labour Organization, 1958). Besides these grounds, the convention authorises the members' States to incorporate any other additional ground if required within the domestic legal framework (International Labour Organization, 1958). The convention ratified by 175 member States is a comprehensive convention and one of the dedicated international instruments designed for guiding national legislation on promoting non-discrimination and equality at the workplace.

Despite the unanimous acceptance, by member nations, for providing a non-discriminatory work environment with equality for all employees, one common form of discrimination on the grounds of sex is persistent in workplaces that produce hindrances to women to work with dignity. Women are facing violence in the form of sexual harassment repeatedly. The condition of women has been getting worse amid the lockdown as many women throughout the globe are experiencing sexual abuse and harassment while working from home (Mathai, 2020). The global pandemic has had devastating effects on the life of most of us and women in particular women. The lockdown saw a significant increase in the cases of crimes and cyber crimes against women (PTI, 2020). There was an enormous increase in the cases of sexual harassment during the pandemic. Work from home has brought about new forms and instances of sexual harassment, which were absent in the physical workplace environment (Mathai, 2020).

The data released by NCRB on sexual harassment gives a picture of a constant increase in the incidents. In 2017 it shows 20948 incidents of sexual harassment with a 3.4 crime rate which became 20962 in 2018

with a 3.3 crime rate, however, in 2019, 18334 incidents of sexual harassment were reported with a 2.8 crime rate with a percentage share to IPC crimes 6% (NCRB, 2019).

An analysis of annual reports of 100 BSE companies was conducted by 'ComplyKaro Services" (Bhattacharyya, 2019) that showed a 14% increase in sexual harassment complaints in FY19 (Bhattacharyya, 2019). There was a five percent spike in the cases of sexual harassment reported to NCW in 2020 (Express News Service, 2021) the number of which is increasing incessantly (85% women experienced harassment and online violence) (Yahoo Finance, 2021), thereby risking women everywhere in particular in workplace (Human Rights Watch, 2020). The data collected by 'ComplyKaro Services' reveals that companies registered 823 cases of sexual harassment in 2019, compared to 722 in 2018. However, during offline business hours when people were working from home, there was a slight reduction in the number of registered cases, and 734 complaints were received in FY20 (The Nifty-50 companies reports) (Somvanshi, 2021). That means working from home has not affected the mental state or attitude of men towards women and sexual harassment or misconduct too got routed to home (Martinuzzi, 2020b). The year 2020 recorded a series of incidents during online work from home (Farrer, 2020) not just in India but throughout the globe. Online sexual harassment does not recognize geographical barriers and may happen against any woman from anywhere. Online meeting platform provides a potential field for the sexual harassment and the cases are abounding in the cyberspace. Instances of sexism and misogyny have moved from the offline physical environment to the online virtual environment. An instant case is that of Rihanna (Bhaumik, 2021) While it may be contestable and debatable that Rihanna should not have taken a stand on a political

debate of the country, yet the way she was trolled on the online platform was something that could have been avoided. (Warjri, 2021) Online abuse is rampant for women. A study conducted by 'Amnesty International' pointed out that women politician faced a lot of abuse online. Similarly, Pew research has also pointed out that women experienced a large amount of sexualized online violence (Duggan, 2017).

Before we delve into an analysis of what constitutes a workplace there is a need to understand the historical evolution of the law relating to the Sexual Harassment of Women in the Workplace.

Historical evolution of Law on Sexual Harassment in India.

The right to live with the human dignity of women is recognised under the Constitution of India and is well protected under A-21(*Maneka Gandhi v. Union of India SCR (2) 621*, 1978). Article 21of the Constitution of India deals with the fundamental right to live with dignity as part and parcel of the right to life and liberty. Although the fundamental right to live with human dignity was guaranteed under the 'Constitution of India', yet there was a dearth of any law or provisions to control the scourge of gender-based harassment in the workplace. The necessity of such legislation was accentuated by the Supreme Court of India in a case.'("Vishaka & Ors. v State of Rajasthan & Ors. 6 SCC 241," 1997) was filled by social activists and an NGO for seeking remedy for the workplace harassment of women. The case made the court think about the mandate to provide guidelines for the repudment of sexual harassment of women at the workplace. The judgment was delivered by Chief Justice J.S Verma as a representative of Justice Sujata Manohar and Justice B.N Kripal (The Wire, 2018) where the court emphasized the need for protection of women

from sexual harassment in the workplace with appropriate redressal mechanism for handling the cases and inflicting the punishment to the perpetrator of the wrong. The Supreme Court exercised its power under Article 32 and Article 141 of the Constitution of India and mandated all workplaces or institutions to follow the 'guidelines' framed until parliament enacts on the issue.

The basic land law of India mandates every profession, trade, or occupation to provide a safe working environment to the employee as its absence hampers the right to live a dignified life. The court in Vishakha's case ("Vishaka & Ors. v State of Rajasthan & Ors. 6 SCC 241," 1997) recognised the right of women to work in a protected environment free from any kind of sexual harassment in the workplace as an inalienable right guaranteed under Article - 14, 15, 19(1) (g) and 21 of the Constitution of India. The Supreme Court based its decision on the mandates of Article 11 of the 'Convention (CEDAW) (UN General Assembly (34th sess. : 1979-1980), 1979) and tried to eliminate workplace discrimination against women based on gender. The Convention was ratified by the Government of India in 1993 (United Nations, 1993).

This case was the milestone in the history of protecting the dignity of working women in the workplace; however, before this case, the court decided the majority of the cases under section 354 and section 509 of the Indian Penal Code. Section 354("Indian Penal Code," 1860) punishes for outraging the modesty of women, whereas section 509 ("Indian Penal Code," 1860) applies to cases of insulting women by uttering words or doing a disagreeable and unpleasant act. In nearly all of these cases the complexity of proving 'outraging woman's modesty' couldn't bring justice to women victims. Moreover, malefactors are exploring new ways to harass women. Thus to examine

the applicability of the Act in the cases of workplace harassment, there is a need to be more precise on what constitutes sexual harassment.

Conceptualizing Sexual Harassment of Women at Workplace

The historical evolution of the term sexual harassment' can be traced back to the 1970s, (Zippel, 2006) nevertheless the agony is as old as industrialization (Zippel, 2006). Initially, in most cases, the court treated harassment issues as personal problems rather than discriminatory situations (Boland, 2005). A large number of studies find that women are often sexually harassed in their workplace and receive sexually explicit materials at their office desk (Howard, 2007). Sexual innuendos are the common forms of harassment (Saguy, 2003) where women receive comments on their dress, age, body structure, colour, etc. directly or indirectly. Most of the time women do not have the courage to speak against such acts under the fear of admonition, removal, or punishment. However, if she communicates, revealing the true color of the remark (verbal innuendo) becomes the next challenge.

The laws and policies of many countries to handle workplace harassment are based on the principles of non-discrimination and equal employment opportunities, which mean that women should not be discriminated against in the workplace if they carry the same profile. Any gender-based treatment that embarrasses women or makes them discomfited is discriminatory towards her self-being and may constitute harassment.

Any discriminatory behaviour towards women based on their gender may constitute Sexual harassment or 'harassment based on the sex of an individual is sexual harassment' (Wagner, 1992). According to Linda (Howard, 2007) the act of sexual harassment has four

elements. The first element is there must be an action that can be physical, verbal, or visual. The second element requires the action to be unwelcome or unwanted for the target. The third element is the action must be sexual in nature and the fourth element is the apparent economic impact on the target or his job or his work performance (Howard, 2007).

The law("The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act," 2013) to provide protection against sexual harassment at the workplace came after sixteen years of Vishaka case ("Vishaka & Ors. v State of Rajasthan & Ors. 6 SCC 241," 1997). The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act," 2013 (Hereinafter called as the Posh Act) was enacted to control the issues of sexual harassment in the workplace by bringing employer under the liability to ensure protection at the workplace through an in-house redressal mechanism. Thus the Act came to eliminate gender biases and to establish the principle of equality in the workplace. Initially, the charges of sexual harassment were framed in the instances of physical touch only, but the court augmented the applicability of the Act to verbal abuses. Today sexual advances are the quintessential form of gender-based harassment (Schultz, 1998).

The PoSH Act defines sexual harassment as unwelcome acts or behavior that can be direct or by implication. Here unwelcome behavior is an act that is objectionable but does not mean an involuntary act. For some acts that may not be offensive and objectionable when the victim is willing, but if she considers it unwelcome, it may constitute sexual harassment. Thus, depending upon the circumstances of each case any act, statement, joke, conversation, message, or demand, etc. may constitute sexual harassment (United Nations, ND).

Nevertheless, the relationship between the complainant and the accused is vital to deciding the offence. If an accused is in a dominating position, the consent of the victim has no meaning. A teacher and students come in this category as they are not equal and involve hierarchical differences between them ("Ajay Tiwari vs University of Delhi and Ors ", 2019). It is a matter of power dynamics thus even an apparent consent has no meaning as a request of sexual favor by the teacher may make a student take it as an implicit/ explicit condition of supervision/teaching/ guidance or even future employment ("Ajay Tiwari vs University of Delhi and Ors ", 2019). Any dominating position can be exploited for gaining the sexual favor.

The PoSH Act under Section 2(n) mentions certain actions that constitute sexual harassment which includes inappropriately touching a woman or asking her for sexual favor or makes them notice or watch porn pictures or videos or any other unwelcomed act etc. Any act that harasses women or makes them feel harassed may constitute sexual harassment. A long list of acts that may constitute sexual harassment is provided by the United Nations including certain gestures, unwanted letters, sexual looks, etc. (United Nations, ND). Sexual harassment can be physical, verbal, or non-verbal. It can be subtle or forthright. In the European Committee two types of sexual harassment i.e. 'quid pro quo' harassment and the creation of a hostile work environment are included in the definition of workplace sexual harassment (N Haspels, 2001).

The PoSH Act under section 3 mentions the circumstances that may bring any action in the category of sexual harassment. These provisions are very strong and if an act is committed by creating hostile work environments as mentioned in the Act, an

action as per the recommendation of the internal complaint committee (ICC) can be taken by the employer against the perpetrator.

The victim of an act of sexual harassment can file a complaint under the PoSH Act before the committee without any further proof of physical touch by the perpetrator as any act that affects the dignity of women constitutes the act of sexual harassment. Thus looks, gestures, expressions, and body movements that create a hostile work environment are adequate to constitute the offence. An observation of 'Delhi High Court' in the case of *Shanta Kumar v. Council of Scientific and Industrial Research is* worth mentioning wherein the court expounded that physical contact with the victim with the intention of obtaining the sexual favor or demand of sexual favor or similar advances would constitute sexual harassment, however, an unwelcomed accidental touch would not amount to sexual harassment. Hence, physical contact must suggest the demand for sexual favor or similar activities. An altercation or argument that may create a rancorous or unwelcoming work environment may constitute harassment but not sexual harassment. ("Shanta Kumar v. Council of Scientific and Industrial Research (CDIR) & Ors, 156 FLR 719 ", 2018). For constituting the offence of sexual harassment the behavior or act must be linked with the act of sexual harassment. In the absence of any such connection like allegations as mentioned in the Act, the act cannot be treated as sexual harassment, merely on the basis of an allegation of intemperate language. ("K.P. Anil Rajagopal v. State of Kerala, Kerala High Court, 1 KLJ 106)," 2018).

Sexual harassment in the workplace is a form of discrimination that may affect any employee's ability to work. Sometimes, the statement or jokes are not just targeting the victim, but anyone who by her mere presence may get affected due to the use of inappropriate language or behavior, etc., even though not directed to her. Thus, any action, gesture, or utterance with a sexual connotation may constitute the offense of sexual harassment if it creates an environment that may affect the employee to continue her job. However, the absence of such a connection between act and behavior may not constitute the offence of sexual harassment. Thus, if a mail or message is sent with a sexual remark or with a demand of sexual favor or similar advances, the offence can be treated as an offence of sexual harassment in the workplace, subject to fulfillment of other condition such as email should be either an official email or must be generally used for official communication. Nevertheless, the offence is already sexual harassment under the other provisions of the Indian Penal code.

Non-Sexual Harassment in the Workplace

Sexual harassment at work differs from non-sexual harassment. Non-sexual harassment is wider than sexual harassment but a less serious form of wrong against women in its comparison (Luenendonk, 2020). Non-sexual harassment means a hostile work environment (Shouse Law Group, 2020) where harassment may take place in several forms but not sexual. It includes all sort of harassment inflicted towards anyone whether male or female which may include offensive gestures, racist slang, offensive phrases, showing drawings that are offensive, making comment on looks, dressing, religious faith or beliefs, calling them by their nicknames or the wrong name intentionally, provoking others to do the same, remark on skin colour or physical disability, ethnic belief, making derogatory age-related comments, using abusive language, insulting them by calling them subordinates. But non-sexual harassment is not just limited to this. Anything that is not acceptable ----- derogatory or makes

feel low in esteem to a person may constitute non-sexual harassment. In the workplace both sexual and non-sexual harassment are on the rise (Luenendonk, 2020). However, sexual harassment is more serious and women may face a permanent sort of fear to work. The employer has a legal, ethical, and employee relations obligation to thoroughly investigate the charges and thus owes a duty to make sure that their employees aren't subjected to an environment where they are exposed to any unlawful act, not even by non-employees. For applicability of the Act, it is necessary for us offence to have been committee in the workplace.

A newly introduced system of online work culture has increased the rate of crime against women specifically in the workplace, which poses the need for conceptualizing it. The next section deals with it.

Workplace

For applicability of this Act, the incident must happen in the workplace. Section 2(o) of the PoSH Act defines 'workplace' with six separate categories of the workplace. For the convenience of understanding a workplace, under the Act, can be classified into three categories - that are industries, sectors/institutes, and extended workplaces. The first category of the industry is inclusive and includes government/private companies, the film industry, sports industry, music industry, hospitals, hotels, hospitality industry, banking, insurance, finance industry, law firms, petroleum industry, textile/fashion industry, railways, airways, IT industry, retail industry, etc. Irrespective of the industry where women are working as labor or a doctor or an actress or a reporter etc., the employers are under obligation to provide their employees with a safe, secure, and protected environment not implicitly or explicitly affected by a hostile and offensive work environment.

The second category is sectors/institutes. The sector as a broad classification consists of business segments such as agricultural, education, economic, forestry, media & entertainment, construction, manufacturing, transport, technology, etc. The agricultural sector will constitute fisheries and animal husbandry. Therefore, any woman who works in these sectors shall be protected under the Act. Even teachers, students, staff working in the education sector are also covered under the Act since the place they are working/studying at constitutes a workplace for the Act. A woman working in the manufacturing sector i.e. either working in a packaging company or at a construction site is protected under the Act. Further sales and communication services, a cooperative society, a lawyer's chamber, any government offices, shops are 'workplaces' for the Act.

Extended workplaces

The Act not only defined the workplace but also introduced the concept of the extended workplace to include every place women visit to complete an official task and may be subjected to sexual harassment by her colleagues, boss, or any other person. Thus extended workplaces include the use of the transportation facilities provided by the employer, the sports complex or venue visit for work-related activities, market visits for sale and purchase, hotels or restaurants visits for work-related meetings, etc. The workplace is not restricted merely to a confined place or an office constructed with bricks. The changing dimensions of business and work has extended the workplace from premises to outdoors.

Since the work is unrestricted, so is the law. The PoSH Act was designed to have wider applicability, to cover every possible place of work in the definition of workplace, so any

complaint of sexual harassment shouldn't remain without remedy. The inclusive definition of workplace under the PoSH Act covers every place where women visit officially and thus may be subjected to sexual harassment. ("Jaya Kodate v. Rashtrasant Tukdoji Maharaj Nagpur University SCC OnLine Bom 814," 2014). The Act applies to all work-related activities whether indoor or outdoor and thus the Act extends the liability of the employer to every place the employee visits for completing the business-related task.

This Act has broadened its horizons in its applicability to foreign entities as well. For the act of sexual harassment during an outstation visit by one employee, the termination of his employment on the recommendations of the 'Internal Committee' was upheld by the Delhi High Court in 'Gaurav Jain v. Hindustan Latex Family Planning Promotion Trust and Ors'("Gaurav Jain v. Hindustan Latex Family Planning Promotion Trust and Ors. (SCC OnLine Del 11026)," 2015).

Cyber Workplace - Expanding the 'Workplace'

Corporate, firms, and educational institutions, etc. have transformed workplaces due to lockdown and there was a switch from a physical workspace to a remote workspace. Work from home was the only available option during the lockdown to manage life, work, and COVID situations for many. It is pertinent to mention that work from home is not a standard practice in India but amid pandemic, almost everyone was forced to adopt a remote workplace during the lockdown and the practice is continued in various organizations (Sapana Agrawal, Aaron De Smet, Sébastien Lacroix, & Angelika Reich, 2020). This change is not acceptable to many while some are more willing to go with the remote models of work in the coming days (BBC, 2020) after the end of the pandemic era.

Since almost everybody moved from office to work from home mode, women too moved like everyone. Thus women expected to get relief for sometimes from unpleasant and unsolicited behaviour of boss, colleagues, or other people at work. Nevertheless, the new system of the remote workplace hasn't been good enough to ameliorate the conditions of women in the workplace (Singh, 2020) and numerous incidents of sexual harassment have been reported (Modi, 2021) during the lockdown that intensifies the issues of 'cyber workplace harassment'(Mitchell, 2021). The incidents of sexual harassment are not new but workplace harassment in cyberspace is the result of an instance of the remote workplace (Nilsson, 2021) in the absence of physical interaction (Modi, 2021). It is significant for state that not many incidents of online harassment were reported(Gupta, 2021).

Technology has not just assisted to manage things while sitting at home, it added challenges too. The pandemic has revealed the inherent threat which can be seen in increased incidents of cyberbullying, cyber harassment, cyberstalking, (Rice, 2020) etc. Today, when women started working online, workplace harassment has changed its mode and incidents of cyberbullying, cyber harassment, cyberstalking, reverberate in the workspace too. (Martinuzzi, 2020a) . The cases of sexual harassment in cyberspace are not new (Barak, 2005) online workplace culture added the victim from online workplace also. Thus the present condition imposes liability on the employer to take adequate measures to protect employees from every kind of harassment (Curry, 2021) which includes cyber sexual harassment. This raises the question of applicability of the PoSH Act in remote working set-up or virtual workplace.

Salmond also emphasized interpreting laws in

the light of the spirit of its enactment in place of letters used in the law as letters are only an external manifestation of the enacted law. Thus the PoSH Act needs to be interpreted in the light of its purpose to protect women from every kind of sexual harassment occurring in the workplace. The legislative intent behind the PoSH enactment was to eliminate arbitrariness from the workplace, ensure gender neutrality and guarantee equality of status and equal protection of the law to the working women. Thus the Act came to provide remedies for sexual abuses and sexual harassment in the workplace.

The Act defines workplace under section 2(o)(VI) of the PoSH Act, wherein it includes "dwelling place or house" as one of the categories of the workplace. Interpreting the term "dwelling place or house" to domestic help/ servants would be a narrower and restrictive interpretation. Therefore, to attain the object and the purpose behind enactment, there is a need to interpret it dynamically by increasing the scope of 'workplace' towards including remote workplace or work from home in the definition, while ensuring the inclusion of telework for handling the unwanted sexual advances in cyberspace.

The workplace in remote working or online working may include all work-related conversations, online meetings, phone calls; emails, chats, messages, etc. Google Meet platform, Zoom Meetings, or any other online meeting platform is the workplace for the PoSH Act where merely physical presence is missing. People on this new meeting platform can see each other, talk to each other, can show things if they want, and thus the possibility of sexual abuse on the online platform cannot be overlooked. An email address or website is a place of business in the absence of any office address according to section 13 of the Information Technology Act, 2000. Thus every

work-related activity whether online or offline constitutes a workplace for the purpose of the PoSH Act.

Status of Unorganised Sector

Sexual harassment is not only an issue of organized sectors unorganized sectors too have witnessed it equally(Gupta, 2021). Organised sectors consist of workers who are employed by the government, state-owned, and private sector enterprises. Governed by proper terms of employment, they have fixed salaries; other paid benefits, and assured and structured work. Unorganised sectors on the other hand consist of workers who work in a place that is unrecognized or unregistered and unregulated by the Government. There are not many laws to protect the unorganized sectors, which raises the question of the safety and security of the women workers working in an unorganized sector from the act of sexual harassment. The Act (PoSH) does not differentiate between organized and unorganized sectors and is applicable to all victims of sexual harassment.

Protection laid down under various legislations against cyber harassment

The definition of sexual harassment is given under section 2(n) of the Act (PoSH). Accordingly, any unsolicited act or unwelcome behaviour as mentioned in the section whether direct or indirect may constitute sexual harassment. This section does not specifically mention the place of occurrence of these acts. Thus on the question of applicability of the PoSH Act in the cases of cyber sexual harassment, there is a need to see the definition which is not restrictive and attracts punishment for all acts of sexual harassment against a woman if it takes place during the ordinary course of business, irrespective of the space whether real or cyber workspace. The Act is applicable to aggrieved women that

include any woman regardless of her age or employment status, even a domestic worker is an aggrieved party under section 2(f) of the PoSH Act. Thus the Act is applicable to both organized and unorganized sectors equally.

An act of sexual harassment in real space or in cyberspace or on an electronic platform also attracts the provisions of the Indian Penal Code, 1860 and Information Technology Act, 2000. Sections 354A, 354D, and 509 of the Indian Penal Code, 1860 independently and also read with section 67 & section 67A of Information Technology Act, 2000 punish several sexual offences against women such as sexual harassment, online sexual harassment, cyberstalking, etc. Thus, if a woman is harassed in the workplace by believed stalk on the internet or by transmitting her private, nude, or morphed images, the perpetrator is liable to be charged under the provisions of the IT Act and the Indian Penal Code.

Complaints Mechanism

Internal Complaints Committee (ICC)

The constitution of ICC is a major responsibility of the employer ("Jaya Kodate v. Rashtrasant Tukdoji Maharaj Nagpur University, SCC OnLine Bom 814," 2014). The PoSH Act under section 4 mandates every institution or organization having more than 10 employees to set up Internal Complaint Committee empowered to hear and redress the cases of sexual harassment. If women work in an organization or institution having less than 10 employees the Act under section 6(1) of the PoSH Act provides provision of filing a complaint before the Local Committee (LC).

Sections 4 and 6 of the PoSH Act contain the provision of the composition of both the committees respectively. Composition of the committees with strict compliance of the provision of the Act is mandatory particularly in the appointment of an external member

in the Internal Complaint Committee (ICC), ("Ruchika Singh Chhabra v. Air France India and Anr. (SCC Online Del 9340)," 2018) absence of which may render the inquiry proceedings conducted by an Internal Complaint Committee invalid ("Ruchika Singh Chhabra v. Air France India and Anr. (SCC Online Del 9340)," 2018). However, the expert doesn't need to be with legal background or knowledge mere experience in social work is adequate ("Shital Prasad Sharma v. State of Rajasthan and Ors. (SCC OnLine Raj 1676)," 2018).

For initiating the inquiry procedure a complaint within the three months of the incident can be filed by the aggrieved women. Section 9 of the Act (PoSH) empowers the committee to condone the delay for three months. However, by citing the reasons in writing ICC, if satisfied with the reason provided by the complainant, can allow for an additional time period of three months (i.e. up to six months) for filing a complaint ("Tejinder Kaur v. UOI, Delhi High Court, (SCC Online DeL 12221)," 2017). In the series of incidents, the three months should be counted from the date of the last incident (Section 9 (1) - PoSH).

If complainant suffers from any physical (Rule-6(i)-PoSH Act) or mental (Rule-6(ii)-PoSH Act) incapacities, the complaint can be filed by her legal heirs according to section 9 (2) of PoSH Act. ("The Sexual Harassment of Women at Workplace Rules, 2013," 2013).

Conciliation

The employer is under obligation to make its employee aware and sensitize (Section 19 and 20 PoSH) so that issues of sexual harassment in the workplace could be minimized. Nevertheless, if the employer receives any complaint, he needs to transfer the same to the committee (ICC) while extending all the necessary assistance. The employer should

also, monitor timely submissions of reports and act upon the recommendations of the committee (ICC).

The conciliation process starts on receipt of the complaint. The employer should provide an accessible place for inquiry within 500 km of the place of the incident. A place of inquiry far from 500 km may itself constitute harassment. ("K.Hema Latha v. State of Tamil Nadu, (MANU/TN/1414/2018)," 2018).

After receiving the complaint the committee will primarily try to settle the matter between the complainant and the respondent through conciliation. If both the party agrees and a settlement is arrived at, the Committee will conclude the case without conducting any inquiry further. (Section 10 PoSH Act). However, if conciliation fails or if the terms agreed by the parties or respondent are not complied with, the committee shall proceed further with the inquiry (Section 11- POSH Act). The presence of all committee members is not necessary for conducting any inquiry, any three members with the presiding officer may conduct the inquiry. ("Shital Prasad Sharma v. State of Rajasthan and Ors. (SCC OnLine Raj 1676)," 2018). The inquiry must be conducted fairly, within the time period of 90 days (Section 11(4 PoSH Act) by appropriately applying principles of natural justice.

ICC is not under any legal obligation to follow the strict rules of procedure and evidence for conducting the inquiry in the cases of sexual harassment; they can apply their own rules of procedure in conformity with the principles of natural justice. ("Gaurav Jain v. Hindustan Latex Family Planning Promotion Trust and Ors. (SCC OnLine Del 11026)," 2015). Since, an inquiry by ICC is not a preliminary inquiry but instead of a full-fledged inquiry, ("Sibu v. Air India Limited, (2 KLJ 434)," 2016) it should be conducted as 'disciplinary proceedings' to prove the misconduct. This means both

the parties should be provided with an opportunity of being heard and present their case against the findings of the committee. If an employer receives any allegation of bias against any member of the ICC, the matter will be investigated by the disciplinary committee. During this period until the decision of the disciplinary committee (ICC) arrives, the inquiry proceedings of sexual harassment case by ICC should have stayed and the committee will recommence the inquiry if the disciplinary committee finds allegations wrong. However, if allegations prove, the whole proceeding conducted by the ICC will be cancelled and a fresh inquiry of the case would be conducted by the newly constituted committee. ("Tejinder Kaur v. UOI, Delhi High Court, (SCC Online DeL 12221)," 2017). Thus the committee should behave impartially free from all kinds of biases and ensure justice to the victim as directed under the Act. Failure to do the same may attract disciplinary action against the committee by the employer.

The decision of ICC is respected by the court in many cases. Bombay High Court in Vidya Akhave v. Union of India, Department of Women & Children & Ors, also emphasized that if ICC while conducting the inquiry applies the principles of natural justice and gives adequate opportunities to both the parties to present their case and concludes the case fairly, the court shouldn't interfere and re-appreciate the evidence merely on the grounds of possibilities of two interpretations or perspective and thereby concluding the case with the other interpretation. ("Vidya Akhave v. Union of India, Department of Women & Children & Ors (LLR 357)," 2017) A case against the decision should be filed in the court, in whose territorial jurisdiction the act has occurred. ("Biplab Kumar Das v. IDBI Bank Ltd and Others, (LLR 1148)," 2017)

The Act under section 11(3) of the PoSH Act

vests the committee with the power of the civil court while inquiring into such complaints in certain matters. The committee can exercise its power to enforce the attendance of any person related to the case. ("Ashok Kumar Singh v. University of Delhi and Ors (LLR 1014)," 2017). The Committee under section 12 of the Act can provide interim relief if needed during the pendency of the case, (("Confidential v. Indian Institute of Corporate Affairs (SCC Online Del 6801)," 2018) can recommend transfer of the aggrieved woman or the respondent if needed and requested in writing (12(1)(a) PoSH) and can grant any appropriate relief (Section 12(1)(c) PoSH) including leave/s to the aggrieved woman (Section 12 (1)(b)- PoSH).

If the committee within 10 days of completion of inquiry finds accused guilty, if shall submit its recommendation with punishment to the employer/ District Officer (Section 15, PoSH, Act) who shall act upon it within 60 days of recommendation (Section 13, PoSH Act). The employee can be punished to the extent of the dismissal from the services if charges of sexual harassment are proven ("Mohan Kumar Singh v. Chief Manager (HRD) Central Bank of India, SCC OnLine Pat 2483," 2017).

Publication of the identity of any of the parties involved in the case is prohibited except information about ensuring justice to the victim. A contravention to this may lead to penalisation under service rules and in such absence in accordance with Rule 12 ("The Sexual Harassment of Women at Workplace Rules, 2013," 2013).

Conclusion

Needless to mention, sexual harassment is the worst kind of violence against women and remains the most sensitive issue which entails great attention to be dealt with high care, caution, and sensitivity. The indefatigable defenders of human rights find it callous towards women and her dignity, if she is not protected from harassment in the workplace.

Amongst other discriminations, sexual harassment is identified as the worst form of discrimination against women, which undermines the dignity, integrity, prestige, and stature of women not only in the workplace but in society too. There is no denying that sexual harassment may be perpetrated against both men and women, yet the reality is that women are victimised in most cases. All those working at the same place deserve to be treated equally without any discrimination. The workplace environment should be conducive for working, free from all biases, protected, and secure for women. The woman many times after the incidents undergo traumatic psychological, physical, professional, and in some cases bad medical experiences (Thomas, 2021). This is not the end of the trauma, the impact appears at multiple levels impacting other employees and even the whole working environment got spoiled because of the occurrence of the incidents where society suffers at large resulting in impeding the growth and development of the nation. The occurrence of any such incident of sexual harassment in any organisation not only disrepute the institution but may lead to face legal consequences which becomes detrimental in its growth.

The incident of Smt Bhawri Devi, the event of Vishakha's guidelines followed by the enactment of the PoSH Act manifest the concern of the legislature and judiciary for ensuring a protected work environment for women. Nevertheless, the eight-year-old PoSH Act couldn't cure the disease of workplace harassment of women and an incessant increase in the cases can be seen with an addition of the cases of sexual harassment in cyber workplace.

The pandemic has shifted workplace to home, which distressed the situation, and

technology that fetch work to home carried harassment too. Undeniably, the information and communications technology has gained an edge to its use, but couldn't hide the potential that it carried for its abuse and thereby adversely affected the lives of women throughout the world. The explosion in the incidents of cyber sexual harassment in the workplace is an example of gross misuse of technology that got the spotlight amid the pandemic.

Accessibility and ease of use are the nature of online communications which blurs boundaries between professional and personal lives. The boundaries between formal office communications and largely informal social media communication are being lost and this has led to an increase in online harassment for women (Shekhar, 2021). What is acceptable on social media becomes unacceptable when interacting with colleagues online, thus continuing, in the same way, leads sometimes to harassment of women. The clear line of distinction between workplace and home is absent in online communications. In addition, while people are trained in handling the offline work environment, the same is not the case with handling an online work environment (Kumari, 2021). Further, in certain cases, cultural differences between countries can exacerbate the feeling of harassment. Ironically, the awareness about the consequences of the Act and redressal against the same are limited.

Undoubtedly, the ICC is playing a vital role in ensuring justice for women; the apex court in several cases not only endorsed their role and authority but also upheld the recommendation of the ICC. The court also recognised and allowed the exercise of power by the ICC as an independent inquiry body. However, for the effective implementation of the PoSH Act not just a set-up of a body is enough, there is an equal need to create a non-discriminatory environment where women can come forward and speak up of their grievances.

Nonetheless, the question of the PoSH Act to handle the emerging issues of remote working set-up is of paramount importance. For handling the issues of workplace abuses in cyberspace, the court needs to interpret provisions of the PoSH Act liberally while finding the legislative intent behind the Act in particular 'workplace'. The definition of the workplace under the Act already considers a dwelling place or a house as a 'workplace' and women working from home for the office are integrated properly into the legal framework. The change in the traditional workplace amid the pandemic in the virtual mode necessitates the need to redefine the workplace in the light of incidents reported during virtual working in digital offices.

Indisputably technology and the internet have their own share of problems and limitations, but increasing of the scope of the Act with the dynamic approach while including telework in the definition of 'workplace' would be in line with the object and purpose behind the enactment. This way of the interpretation would not only extend protection to the interest of working women but also would encourage them to work ensconced in the protected environment whether online or offline and thereby will ensure swift and efficient justice to working women.

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Corrigendum

The Name of the author of the article titled **"The 'Golden Triangle' –A Hub for Narcotics Trade and Its Repercussion for North-East India vis-a-vis The Act East Policy – An Analysis"** may please read as **Dr. Aparajita Baruah** in place of **Dr. Aprajita Baruah'** 'in January-March, 2021 issue of The Indian Police Journal.

2. The printing error is regretted

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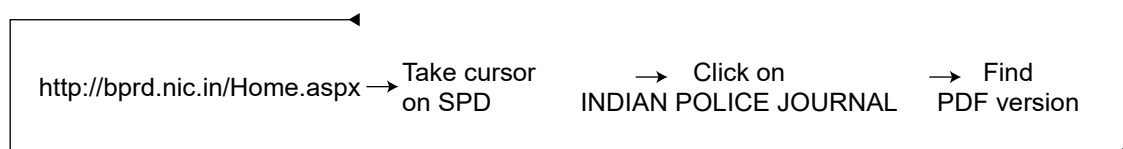
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