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Note for Contributors

The Indian Police Journal (IPJ) is the oldest Police Journal of the country. It is being published since 1954. It is the flagship Journal of a Bureau of Police Research and Development (BPR&D), MHA, which is published every quarter of the year. It is circulated through hard copy as well as e-book format. It is circulated to Interpol countries and other parts of the world. IPJ is a peer reviewed Journal featuring various matters and subjects relating to policing, internal security and allied subjects. Over the years it has evolved as an academic journal of the Indian Police providing critical inputs to the stakeholders of policing and internal security.

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FOREWORD

The Police is the most visible arm of the Government and custodian of law and order. The intricate nature of criminal cases and the ever-increasing numbers of crimes create difficulties and challenges for police personnel, adding to the stress and strain experienced by already overburdened police staff. After independence, the objective of police departments in India shifted from focusing solely on maintenance of the ruler's authority to providing a wide variety of public services. The responsibility of the police has increased exponentially with rapid changes occurring in society.

The prevention, detection and investigation of crime require a police officer's focused attention, requiring special skills and abilities by the officers. Physical well-being has a very important role in the daily life of police personnel. The duties of a police officer require physical stamina. Their demanding jobs result in irregular meals, inadequate sleep, leaving no time for exercise. The physical, mental and emotional health of police personnel are critical determinants of their productivity, social sensitivity and the quality of their service delivery. The physical dangers and mental stress associated with police work, the need to remain alert and vigilant 24/7, sleep deprivation and disrupted work-life balance, take a huge toll on physical and mental health, often leading to behavioural aberrations.

The workplace is one of the most important settings for mental health promotion and behaviour change. Interventions aimed at mental health protection need to be implemented at the organisational level, targeting working conditions and policies, or at the individual level through programmes on stress management and skills training to provide personnel with the tools and resources to cope with the impact of work-related problems. A proactive approach to the physical and mental health of Police personnel, especially Yoga, and improving their living and working conditions would strengthen the police-public engagement and service delivery, and instill citizens' trust in the Police.

The articles of the present issue of IPJ attempt to provide an overview of the varied nature of crimes plaguing our society and suggest ways to combat them. I hope that you will find these articles useful and will also continue contributing your valuable suggestions for further raising the standards of the IPJ.

(Balaji Srivastava)
Chief Patron

"Promoting Good Practices and Standards"

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EDITORIAL

The Indian Police Journal is a flagship journal on Policing and Correctional Administration, listed in the UGC care list, dealing with subjects ranging from Policing, Police Administration and Management, Correctional Administration and Prison Management, Forensics including digital evidence to sharing of good practices and standards among the Police forces among others. In its own way, the IPJ seeks to contemporize traditional policing wisdom with the requirements of the day.

We have tried our level best to get the finest articles for an informational and educational standpoint from serving and retired police officers, prison officers, judicial members, academicians, and various eminent personalities from law enforcement agencies. This issue covers a number of interesting topics as enumerated below:

Md. Imran Wahab in his article, "Death in Prisons – the present scenario", highlights the deteriorating conditions of the prisons and prisoners and suggests measures to improve the same.

The article, "Strategising Community Policing for Crime Prevention in India", tries to showcase the advantage of community policing as a coherent programme with impressive benefits to the community as well as the Police.

In the article, "Psychological and Lifestyle Characteristics of Victims of Sexual abuse before and after the Abuse", the authors aim to explore the pattern and characteristics of the victims of sexual offences that increase the chances of victim vulnerability, victimization, and victim precipitation for that particular crime committed against them.

The article, "Suicidal Ideation and Perceived Social Support among Police Personnel", endeavours to find the relationship between suicidal ideation and perceived social backing and assess the nature and extent of such assistance among Police personnel.

"Promoting Good Practices and Standards"

Monika Singh's article, "The Vital Coach: Nurturing Talent in Police and Paramilitary Sports", emphasizes on the broader implications of sports and underscores its role in shaping individuals into responsible stewards of public safety and service.

In the article, "Defying Death – A deep dive in IED ambushes", the author provides information on safeguarding Police personnel from IED attacks.

The article, "Plea bargaining in India", attempts to trace the historic evolution of the concept of "plea bargaining" and examine the importance and necessity of the same in India.

Sachin Kumar's article, "Role of Media in Juvenile Delinquency: A Case Study of National Capital Region of Delhi", examines the media content consumption pattern among delinquent juveniles and aims to elucidate the intricate relationship between media exposure and juvenile delinquency.

In the article, "Effect of Yoga on self-rated Sleep of Hypertensive Personnel in India's Central Industrial Security Force", the authors explain Yoga's efficacy as well as importance of a holistic mind-body exercise in improving sleep quality among Hypertensive Personnel in CISF.

The article "Making and Un-making 'Homes': A study of former women prisoner's ideas and experiences of home", seeks to explore the complexities and challenges that women prisoners experience and their ways of manoeuvring while creating a home after release.

In the article, "The Problem of Human Trafficking: a Felonious Business of Contemporary Age", the authors analyze how trafficking impacts the victim physically and psychologically. Along with this, they also attempt to provide measures and services that can be provided to trafficked victims in the country.

The article, "A Study of Automatic Traffic Lights in Chandigarh", focuses on the performance of automatic traffic lights in order to create a system that caters to the current requirements of traffic management.

Pratik Jain in his article, "The Importance of Cloud Platforms for Modern Policing: Enhancing Efficiency, Collaboration, and Data Security", delves into the various advantages offered by cloud platforms to police departments, including improved data management, enhanced collaboration, increased operational efficiency, and strengthened data security.

We hope this publication will be useful to all stakeholders who aspire to bolster the functioning of the Police forces. As always, we look forward to your support and suggestions.


Ruchika Rishi, IG
Managing Editor

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Death in Prisons : Present Scenario

Md. Imran Wahab*



Abstract

A death in custody is a tragic event. The news of a death in prison is distressing for the family members. Hence, the information of death of an inmate should be given to his/her family members promptly and proper enquiry should be conducted to find out the actual cause of death. After the enquiry, necessary remedial measures should be taken and if any prison personnel or any other officer is found guilty of negligence or excesses, proper action should be taken against him/her. While it is true that all deaths in prisons cannot be prevented and some deaths are for natural reasons and unpreventable, it should be ensured that no death is caused due to medical negligence or physical and mental torture inflicted by the prison authorities. Rehabilitation of drug addicted prisoners and mental health care plays an important role in addressing the challenges faced by the prisoners in jails and in reducing prison mortality rate. Improved prison environment, good infrastructure, transparency in prison work and adequate physical and mental health care facilities in the prisons are required to bring down the number of deaths in prisons.

Keywords : Prison, Inmate, death, suicide, unnatural death, mental health

Introduction

When a person in official custody of prison passes away, it is called death in prison. The death may be natural or unnatural and caused inside the prison or outside in hospital or during transit from prison to court or hospital and vice versa. However, the death of a prisoner who was released on parole by the prison authorities cannot be called death in prison.

All deaths in prisons, though unfortunate, cannot be prevented and not every death can be attributed to the failure of the prison system. Deaths in prison may be caused due to unforeseen circumstances, due to natural reasons, which cannot be anticipated or controlled. However, when a prisoner dies due to foul play or negligence of the prison authorities or by the torture inflicted on him by the prison staff,

it invites public outrage and represents the most severe form of prisoner mistreatment. It is obligatory upon the prisons to provide safety and security to the prisoners and uphold and safeguard all their rights to which they are entitled. If the prison fails in discharging its responsibilities towards the prisoner, the prison officials are liable for civil claims as well as punitive measures to restore faith of the general public in the criminal justice system.

The death in prison may be due to natural causes, medical neglect, suicidal, accidental, homicidal or by excessive use of force by the prison officials. Such deaths can create law and order problems both inside and outside the prison and tarnish the image of the prison administration in the eyes of the public. Death in prison is a sensitive issue, with prison authorities often being accused of torture,

Author's Introduction:

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neglect and attempts to conceal the truth behind the cause of death.

Prisoners lodged in jails can be classified in the following categories:

Table No. 1

Convicted Prisoners	They have been pronounced guilty of a criminal offence by the court and have been sentenced to imprisonment.
Undertrial Prisoners	They remain in prison waiting for completion of their trial. Their number is normally highest in the prison.
Detenues	They have been detained in prison under preventive detention laws.
Internees/Awaiting	They have completed their sentence and awaiting release due to procedural delays. They are mainly foreign nationals. In West Bengal most of such prisoners are Bangladeshi nationals.
Civil Prisoners	They do not belong to any of the above categories and have been detained for default of payment of fine or a civil financial liability. They may also be accused of contempt of court.

Public Health Consequences of Imprisonment

Most of the individuals incarcerated in prisons come from poor and economically backward backgrounds. They face significant health issues and grapple with long standing substance abuse problems. Mental disorders and severe illness are prevalent amongst them. Many individuals who find themselves in prison are found lagging in education, employment, housing and financial stability. They naturally have poor access to proper health services. Overcrowding, poor sanitation, limited scope for fresh air and exercise in the prisons make their life more vulnerable to diseases and ill health.

The prisoners who are confined in high security prisons or cells have to remain cut off from the general population of the prison and lead a secluded life. They need special attention of the prison staff vis-à-vis their mental health condition. The act of imprisonment in such uninhabitable condition is likely to enhance mortality rate of prisoners.

Human Touch

The news of a family member in prison causes immense distress to their family members and hence they should be notified immediately about the death. The dead body should be treated with respect and its prompt post mortem should be arranged after informing the concerned authorities for inquest over the dead body. All concerned officers and agencies including National Human Rights Commission and State Human Rights Commission should be notified about the death promptly. The lack of communication and institutional defensiveness often creates suspicious in the minds of the family members of the prison about the cause of death and suspected foul play. Close supervision should be ensured during removal of the body and its transfer to the hospital for post mortem examination in co-ordination with the investigation authorities. Moreover, there should not be any unreasonable delay in returning the dead body after post mortem to the next of kin of the deceased prisoner.



Collection of Reliable Data

The collection and collation of accurate data in respect of deaths in prisons is crucial for understanding the real causes of death and to take remedial measure to formulate strategies and to prevent further deaths. By conducting research and collecting comprehensive data on deaths, we may gain insights into the actual causes of deaths in prisons, identify emerging trends and inform evidence basic policies and practices.

Many countries unfortunately don't have accurate data of deaths in prisons particularly of deaths caused due to drug addiction or drug overdose, as this may compel prison, authorities to acknowledge the presence of drugs inside the prison. Countries like Canada, Scotland and the United States maintain such data. In some cases, it is seen that when a drug addict suffers from withdrawal symptoms there is no drug or medicine inside the prison to deal with the problem. We can't reduce deaths in prisons unless we collect accurate data on deaths in prisons, as only data can help us in delving deep into the causes of death and in taking necessary measures to prevent further deaths inside the prisons. Data will also help in pointing out the lapses on the part of prison administration in preventing unlawful entry of drugs inside the prisons and their negligence in treatment of sick and mentally ill prisoners. With the help of data, we can invite the attention of the government in investing more in prison infrastructure thereby reducing the number of deaths in prisons. Without the analysis of reliable data effective strategies and planning cannot be made to deal with the ever-increasing number of deaths in prisons.

Death in Prisons¹ of West Bengal

The notification of death in prison is sent by the concerned officer-in-charge/superintendent of the prison to:

- i. the nearest Judicial Magistrate empowered to conduct inquiry under section 176(1A) of the Code of Criminal Procedure, 1973;
- ii. the nearest Executive Magistrate empowered to conduct inquiry under section 176 of the Code of Criminal Procedure, 1973;
- iii. the officer-in-charge of the nearest Police station for conducting investigation into the death;
- iv. the National and State Human Rights Commissions within 24 hours of the death;
- v. the family of the deceased prisoner

The inquiry must be conducted to determine the actual cause of death of the prisoner and to find out whether adequate medical attention was provided to him/her and whether there was any abuse, negligence or excessive use of force by the prison officials.

Suicides, inmate murders, deaths due to negligence, deaths due to excessive use of force by the prison authorities, deaths resulting from shootings, deaths due to assault by external parties and accidental deaths may be called as unnatural deaths. Most of the unnatural deaths are caused owing to suicidal hanging. Unnatural death accounts for around 10% of the total deaths in prisons. All cases of deaths in the correctional homes of West Bengal are investigated by the Police and inquiries are also conducted simultaneously by the Executive Magistrate and the Judicial Magistrate. Prisons/ Jails are called Correctional Homes in West Bengal. In the day to day running of the Correctional Homes of West Bengal, West Bengal Jail Code, West Bengal Correctional Services Act, directives of the West Bengal Human Rights Commission, National Human Rights Commission, orders of the Honourable High Court of Calcutta and Honourable Supreme Court of India are generally followed.

¹ Prisons or jails are called Correctional Homes in West Bengal



In the year 2017, 121 prisoners died in the prisons of West Bengal, including 109 natural and 12 unnatural deaths. As per post mortem reports, the unnatural deaths were due to suicidal hanging. The majority of deaths due to natural causes occurred either in the Correctional Homes or in the hospitals where the prisoners were admitted by the prison officials for undergoing medical treatment.

In the year 2018, 92 prisoner deaths were reported in the prisons of West Bengal including 84 natural and 07 unnatural deaths. According to post mortem reports, the unnatural deaths were mostly cases of suicidal hanging. Most of the deaths due to natural causes occurred either in the Correctional Homes or in the hospitals where the prisoners were admitted by the prison officials for undergoing medical treatment.

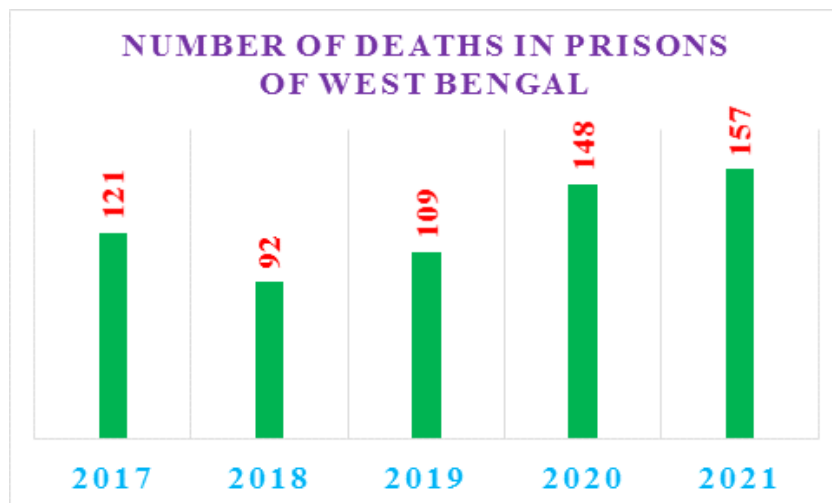
In the year 2019, 109 prisoners expired in the prisons of West Bengal including 102 natural and 07 unnatural deaths. As pointed out in the post mortem reports, the unnatural deaths were cases of suicidal hanging. The majority of deaths due to natural causes took place either in the Correctional Homes or in the hospitals where the prisoners were admitted by the prison officials for undergoing medical treatment.

In the year 2020, 148 prisoners died in the prisons of West Bengal including 126 natural and 22 unnatural deaths. As per post mortem reports, the unnatural deaths were cases of suicidal hanging. The majority of deaths due to natural causes occurred either in the Correctional Homes or in the hospitals where they were admitted by the prison officials for undergoing medical treatment. Notably, 02 of the 05 women prisoners died due to unnatural causes. 05 prisoners died in accidental firing incidents.

In the year 2021, 157 prisoners died in the prisons of West Bengal including 141 natural and 16 unnatural deaths. As per post mortem reports, the unnatural deaths were cases of suicidal hanging. The majority of deaths due to natural causes occurred either in the Correctional Homes or in the hospitals where they were admitted by the prison officials for undergoing medical treatment.

Heart and lung diseases are the leading causes of natural deaths in West Bengal's prisons. It is estimated that an average of 125 prisoners die annually while in custody in prisons in the state.

It is clear from the bar diagram below that the annual number of deaths in prisons of West Bengal has increased in the year 2021 as compared to the





number of deaths in the year 2017, 2018, 2019 and 2020. 157 prisoners died in the year 2021 as compared to 148 in 2020, 109 in 2019, 92 in 2018 and 121 in 2017.

Most of the deaths occurred in central Correctional Homes where the number of prisoners lodged is more than the registered capacity of the prisons. Though most of the deaths have been recorded as natural, non-availability of adequate number of ambulances, ambulance driver, de-addiction and rehabilitation centre, medical infrastructure, mental health care, paramedics, nurses and doctors in the Correctional Homes also contribute to some extent to the increase in the number of deaths in prisons.

A major chunk of the budget allocated from the state budget to the prisons department is eaten up in providing food three times a day daily to more than 27000 prisoners lodged in 60 Correctional Homes of the state and in giving salary to all the officers, men and women working for in the Correctional Homes. A very little amount of the budget is spent on improving infrastructure, increasing prisoner holding capacity of the Correctional Homes, upgrading medical and mental health care facilities, setting up rehabilitation and de-addiction centres, arranging ambulances with

drivers and ensuring life saving measures in the correctional homes. Shortage of medicines in the Correctional Homes is another area requiring special attention of the authorities.

The presence of a large number of undertrial prisoners who constitute around 80% of the prison population is another source of constant headache for the prison administration. Most of the prisoners incarcerated under NDPS and POCSO Acts suffer due to non-granting of bail, non-holding of regular trial and non-release on parole. Bail in NDPS and POCSO cases is sparingly granted by the courts and regular trials in such cases are not held leading to resentment in undertrial prisoners, who have a tendency to indulge in unruly behaviour due to their frustration and inability to visit their homes by the facility of parole.

Overcrowding in some prisons make the lives of prisoners more pitiable. The number of prison officers, men and women does not commensurate with the number of prisoners in the Correctional Homes making life difficult for the prison personnel in handling prisoners. In addition to this, the vacancy position in different ranks makes shortage of staff more acute. Such problems as faced in the state of West Bengal are also prevalent in different jails of the country.

STATEMENT ON INMATES ADMITTED AND RELEASED DURING THE YEAR 2021

Table No. 2

SL. No.	Type of Inmate	Gender	Total Inmates Admitted during the year	Total Inmates Released during the year	Inmates in Jails at the end of the year (i.e., 31st Dec.)	Inmates in Jails at the end of Previous Year	Inmates in Jail at end of the year V2=V1+	Col. V2 = Col. (6)
(1)	(2)	(3)	(4)	(5)	(6)	V1	(4)-(5)	
1	Convicts	Male	3409	5658	2758	5007	2758	
		Female	1318	1483	195	360	195	
		Transgender	16	15	1		1	
		Total	4743	7156	2954	5367	2954	



SL. No.	Type of Inmate	Gender	Total Inmates Admitted during the year	Total Inmates Released during the year	Inmates in Jails at the end of the year (i.e., 31st Dec.)	Inmates in Jails at the end of Previous Year	Inmates in Jail at end of the year V2=V1+	Col. V2 = Col. (6)
(1)	(2)	(3)	(4)	(5)	(6)	V1	(4)-(5)	
2	Undertrials	Male	102743	100281	21308	18846	21308	
		Female	4373	4421	1248	1296	1248	
		Transgender	31	12	21	2	21	
		Total	107147	104714	22577	20144	22577	
3	Detenues	Male						
		Female						
		Transgender						
		Total						
4	Others	Male	1092	1196	151	255	151	
		Female	702	712	87	97	87	
		Transgender	13	13				
		Total	1807	1921	238	352	238	
5	Total Inmates	Male	107244	107135	24217	24108	24217	
		Female	6393	6616	1530	1753	1530	
		Transgender	60	40	22	2	22	
		Total	113697	113791	25769	25863	25769	

113697 inmates were admitted in prisons, 113791 released and 25769 remained in prisons of West Bengal during the year 2021. In 'Others' head there are prisoners, particularly Bangladeshi Nationals waiting for repatriation or deportation, which is a long drawn process.

ANALYSIS OF DEATHS IN PRISONS OF WEST BENGAL IN THE YEAR 2021 NATURAL & UN-NATURAL DEATHS IN PRISONS OF WEST BENGAL IN 2021

NATURAL DEATHS

Table 3

Cause of Death	Male	Female	Transgender	Total
Ageing	04	01	0	05
Illness	126	10	0	136
Total	130	11	0	141

130 males and 11 females (Total: 141) died due to natural causes i.e., ageing and illness in, the prisons of West Bengal in the year 2021.



UNNATURAL DEATHS

Table 4

Cause of Death	Male	Female	Transgender	Total
Suicides	10	0	0	10
Pending Final Opinion	06	0	0	06
Total	160	0	0	16

16 males died due to unnatural reasons in the prisons in West Bengal in the year 2021. Final opinion was pending in respect of deaths of 06 prisoners.

Table 5

Cause	Male	Female	Transgender	Total
Total (Natural and Unnatural Deaths)	146	11	0	157

146 males and 11 females (Total: 157) died due to natural and unnatural causes in the prisons of West Bengal in the year 2021.

BREAKUP OF NATURAL DEATHS DUE TO ILLNESS IN PRISONS OF WEST BENGAL IN 2021

Table 6

Illness	Male	Female	Transgender	Total
Heart Problems	39	02	0	41
Lung problems	18	01	0	19
Liver problems	05	0	0	05
Kidney problems	06	0	0	06
HIV	04	01	0	05
Cancer	05	0	0	05
Tuberculosis (TB)	04	0	0	04
Paralysis	02	0	0	02
Cholera/ Diarrhoea	0	01	0	01
Schizophrenia with Epilepsy	1	0	0	1
Brain Haemorrhage	03	0	0	03
Intestine Perforation	03	0	0	03
Due to Drugs/Alcohol Withdrawal Symptom	07	0	0	07
Others (illness other than the above)	29	5	0	34
Total Deaths due to illness	126	10	0	136



126 males and 10 females (Total:136) died due to natural reasons in the prisons of West Bengal in the year 2021. The natural deaths occur either in the prisons or in the hospitals where the prisoners are admitted by the prison authorities for medical treatment.

BREAKUP OF MODE OF SUICIDE IN PRISONS OF WEST BENGAL IN 2021

Table 7

Mode of Committing Suicide	Male	Female	Transgender	Total
Hanging	10	0	0	10
Poisoning	0	0	0	0
Self-Inflicted Injury	0	0	0	0
Drug Overdose	0	0	0	0
Electrocution	0	0	0	0
Others	0	0	0	0
Total Suicide	10	0	0	10

10 suicidal deaths took place in the prisons of West Bengal in the year 2021. No female prisoner committed suicide in that year. 11 female prisoners out of 157 died in prisons in the year 2021. However, a prison riot took place in Dum Dum Central Correctional Home in the year 2021 during Covid-19 outbreak period, in which undertrial prisoners participated in large numbers demanding their release and ransacked the entire jail. They also burnt a portion of the jail and assaulted prison personnel. The prisoners feared that they would be affected

by the Covid-19 virus if they remained in jail where they had to remain in close proximity of each other. Police had to be called in to control the out-of-control prisoners and only a large contingent of Police personnel could restore normalcy in the jail. The problem persisted for three days and subsided subsequently. Police had to resort to firing to control the rampaging crowd of prisoners, some of whom also tried to flee from the prison by attacking the main gate of the prison and scaling the boundary wall.

ACTION TAKEN ON DEATHS IN PRISONS OF WEST BENGAL IN 2021

- No. of Police Enquiry/Inquest Conducted u/s 174 Cr.PC. : 157
- No. of Post-Mortem conducted by the Doctors (as per NHRC guidelines) : 157
- No. of Executive Magisterial Enquiry conducted u/s 176 Cr.PC. : 157
- No. of Judicial Magistrate Enquiry conducted u/s 176(1)(A) Cr.PC. : 157
- No. of Cases in which Videography conducted during Post-Mortem : 157
- No. of Cases Reported to NHRC : 157
- Final Cause of Death

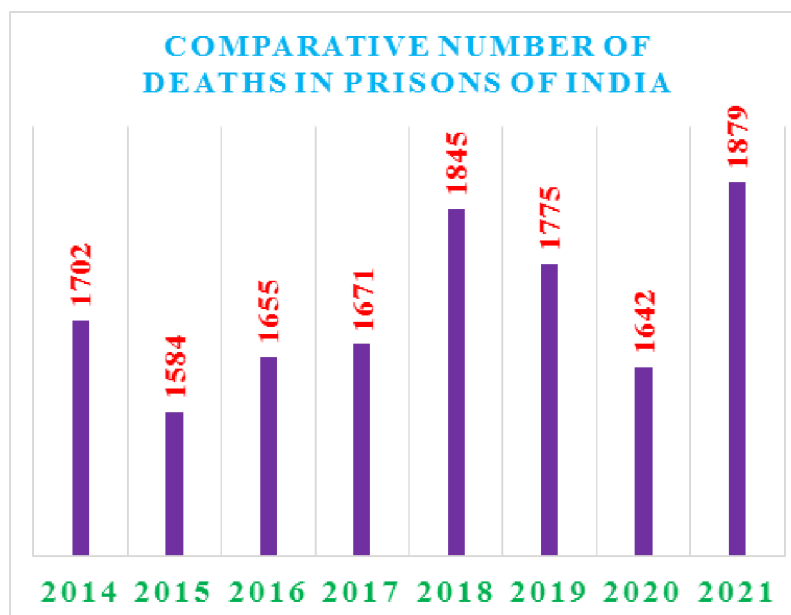


a.	Number of Natural Deaths	: 141
b.	Number of Un-Natural Deaths	: 12
c.	Number of deaths Pending for Final Opinion	: 04
8.	Compensation	
a.	Number of cases in which NHRC ordered for compensation	: 00
b.	Number of cases in which Courts ordered for compensation	: 00

Within the domain of mortality investigation and law enforcement, 157 cases underwent inquest inquiries and Police examination pursuant to section 174 of the Criminal Procedure Code. Simultaneously, 157 post-mortems were conducted with great attention to detail by medical professionals who meticulously complied with the National Human Rights Commission's instructions. Furthermore, 157 executive magisterial investigations were competently undertaken as directed by section 176 of the CrPC, while an equal number of judicial magistrate inquiries were completed under section 176(1)(A) of the CrPC. To ensure

transparency and accountability, each post-mortem procedure in all 157 cases was recorded by videographer and these complete records were conveyed to the National Human Rights Commission. As for the cause of death, it's interesting to see that natural causes were responsible for 141 cases, whereas there were 12 cases classified as unnatural deaths; however, four cases are still awaiting judgment. It's worth mentioning that there wasn't a single reported instance where either the NHRC or the courts awarded compensation in any of these cases.

NATIONAL FIGURE OF ANNUAL DEATHS IN PRISONS



At the national level, the number of deaths in prisons is on the rise as is obvious from the bar diagram given above. 1879 prisoners died in the prisons of India in the year 2021, as compared to 1642 prisoners in 2020, 1775 in 2019, 1845 in 2018, 1671 in 2017, 1655 in 2016, 1584 in 2015 and 1702 in 2014. Efforts should be made to control this rising trend in the number of deaths in prisons.

Measures Required to Reduce the Number of Death in Prisons

The number of deaths in prisons can be reduced by taking up the following measures:

- (i) Prisons face several challenges that impact mortality rates, which is why it is essential to address prison conditions. Overcrowding, poor sanitization, and inadequate ventilation can intensify health problems leading to worsening mortality rates. To promote better living conditions, one must develop infrastructure, provide adequate nutrition, hygiene, and ventilation, and decrease overcrowding in these prisons. This adjustment can facilitate a safer and more empathetic environment. For superior results in tackling inmate issues, policymakers and healthcare professionals must take the time to gather precise data on deaths and their causes. This critical information can be utilized to implement changes within correctional facilities, ultimately leading to improved healthcare strategies and policy changes. Well-equipped ambulances with properly trained drivers are essential in all prisons to provide immediate medical assistance during sudden emergencies, ultimately decreasing the chances of fatality due to medical care being inaccessible.
- (ii) Adequate levels of staffing are a crucial prerequisite for guaranteeing safety and ensuring the welfare of prisoners and personnel. Therefore, it's possible to enhance security measures, ensure more effective inmate monitoring, and increase access to medical aid by increasing the number of officers and staff in prisons while simultaneously filling existing positions. To minimize the possibility of violence and self-injury among inmates, it is crucial to establish a secure and respectful atmosphere inside prisons. Therefore, preventing physical and mental abuse by both inmates and prison personnel is of paramount importance. Incarcerated individuals may experience improved mental health and reduced stress levels in prisons that provide entertainment options. This can lead to an overall healthier atmosphere within the facility.
- (iii) For justice and fairness to prevail in the criminal justice system, it is crucial to ensure that individuals who cannot afford to pay fines are not incarcerated indefinitely due to their economic situation. Prisoners require social connections and emotional support to aid in rehabilitation, making meetings with their family members important. These meetings can be held in person or via video calls. The incarcerated population necessitates proper healthcare, so it's crucial to offer top-notch medical services, such as substance abuse treatment and mental health care, to promote the wellbeing of inmates. Prison healthcare can be improved through better infrastructure, medical staffing, and increased capacity. Access to necessary drugs is vital for inmates' health and safety, and preventing shortages of life-saving medications is imperative.
- (iv) Improving the prison environment by reducing incarceration periods and providing prison staff with comprehensive training in medical emergencies, suicide prevention, and mental health crises can greatly benefit those confined and even save lives. To ensure the effectiveness and humanity of reforms, it is important to establish mechanisms for independent oversight, encourage transparency and accountability, and



collaborate with outside organizations. Reducing the risk of recidivism can be achieved through a carefully designed system that involves vocational training, support services, and education to aid inmates in successfully reintegrating into society. Criminal behaviour can be properly addressed with community-based sentences and restorative justice practices, which tackle the underlying causes. This alternative to incarceration can still ensure public safety. Substance abuse issues can be effectively tackled with the establishment of de-addiction and rehabilitation centres within and outside prisons.

Mental Health Services

Mental health services can significantly decrease self-harm and suicide rates in prison. Offering counselling, therapy, and psychiatric care are essential for inmates who struggle with mental health issues. Access to high-quality mental health services is crucial for improving their overall well-being. Support systems and interventions aimed at meeting the mental health needs of inmates are what comprise mental health services in prisons. These vital services comprise psychiatric care access, crisis intervention, therapy, and assessments. The main objective of mental health services is to promote the well-being of inmates by mitigating mental health conditions. When these services are provided, correctional facilities create a rehabilitative and safer environment, which encourages successful reintegration into society post-release.

Healthcare Facilities

Prison healthcare facilities are essential to ensuring the welfare of incarcerated persons. They offer necessary services such as medical evaluations, chronic and acute care treatments, emergency support, psychological assistance, and dental care. These facilities assume an important part in

proactive medicine, ensuring frequent screenings for infections and conducting efficient control for any outbreaks. Granting medical access to inmates is not only correct but also a legal responsibility to secure human rights, as stated by global norms and local guidelines.

Providing appropriate medication management, discharge planning, and community-based healthcare provider referrals should be a priority for healthcare facilities in prisons to ensure a smooth re-entry into society for inmates. Addressing the healthcare needs of the incarcerated population not only improves their physical and mental wellbeing, but it also reduces the risk of recidivism and enhances public health outcomes. Therefore, comprehensive correctional facility healthcare services are crucial.

To ensure healthcare objectives are kept in focus, it is crucial for medical authorities in prisons to provide leadership and encourage collaboration between security and medical staff. Ensuring regular trials, allocating adequate resources for quality healthcare, and increasing budget allocations for the prison department are key components to achieving comprehensive prison reform. Additionally, providing legal aid services to incarcerated individuals is vital to this process.

Conclusion

A death in prison affects adversely the reputation of both the prison administration and the government. Though all deaths in prisons cannot be prevented, any death occurring in the prison has a profound impact on both inmates and prison staff, leading to mental health challenges such as depression, stress and other conditions. After such tragic incidents both prison staff and inmates need ongoing support. The support to the staff can be in the form of counselling, employee assistance programmes or other measures such as providing time off to help cope with emotional impact, adjusting work duties and offering compassionate leave. The inmates who were residing in the vicinity of the deceased prisoner also need counselling and psychiatric help.

It is also imperative to spread awareness amongst the public that a majority of the prisoners will return back to the society after their release and hence if their illnesses, addictions and diseases are not effectively detected and cured then they will carry the same outside after their release and affect people living outside. Investment in the correctional system is meagre at present in comparison to what is actually required to improve the infrastructural facilities in the prisons, particularly healthcare, capacity building and increasing the number of doctors, paramedics, psychologists, counsellors, gynaecologists, and nurses in addition to setting up of de-addiction centres for dealing with drug addict prisoners. These steps will go a long way in decreasing mortality rate in the prisons. Reintegration of a healthier individual into the community after release will positively impact the society as a whole instead of spreading negativity.

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Strategising Community Policing for Crime Prevention in India



Dr. Ishita Sharma*

Abstract

Criminal investigations do not always lead to solving of crime. Crimes are solved either by swift response of the Police or a Police informer or an individual who comes up with identifying the suspect. Police detectives obtain information from a web of informers and suspects, directly or indirectly linked to the crime to furnish evidence of crime. This shows that community plays a crucial role in solving crimes. The Police have to rely on the members of the community in which the crime occurs in order to solve crimes. However, a hostile and sceptical citizenry is highly unlikely to help the Police in providing information. Thus, community policing is a concept wherein the Police and the communities they are policing share a symbiotic relationship. The author through analytical methodology, with aid of successful case studies in India argues that community policing is not an ambiguous innovative concept but a lucid model with certain programmatic elements. Finally the author argues that there is a dire need to give statutory force to section 85 of Model Police Act that embraces the deterrent model of community policing in India.

Keywords: *Community Policing, Community, Police, Crime Prevention, Coordination.*

Introduction

"The Police are the public and the public are the Police."

- Sir Robert Peel (The Police Federation of England and Wales, n.d.)

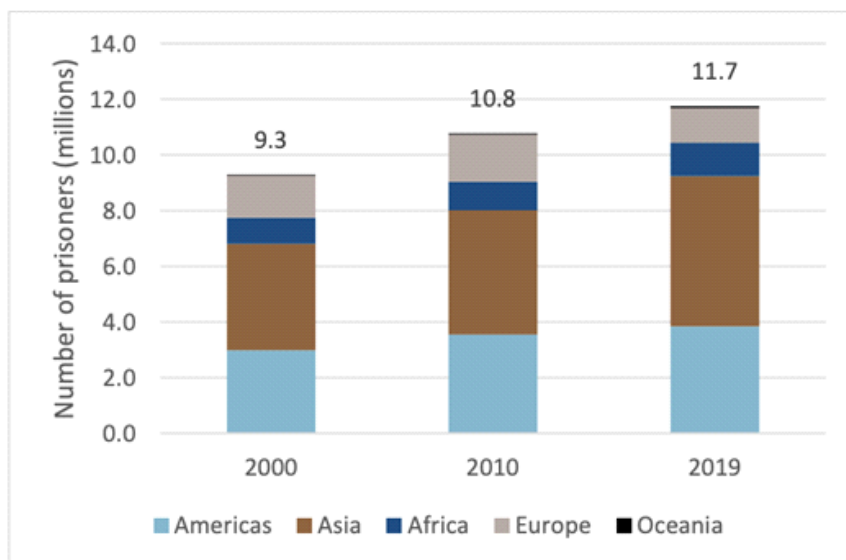
As far as crime is concerned, the twin variables of perception and fear of crime share a unified global response of prevention as well as retribution i.e. to penalize the offender severely and prevent potential crimes through their incarceration

(Theme and Variation in Community Policing on JSTOR, 1988). As far as the data on prison population is concerned, since 2000 the World Prison Population has grown by 24% (Fair & Walmsley, 2021). As far as India is concerned, the prison population in India has grown by a staggering 76% since 2000 (Fair & Walmsley). The global data on prison population can also be illustrated graphically (United Nations Office on Drugs and Crime, 2021).

Author's Introduction:

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Figure 1: Global prison population by regions (2000, 2010 & 2019)



Source: UN-CTS

Figure 1

Source : Data Matters, UNODC Research, United Nations Office on Drugs and Crime

The above graph illustrates the rise in global prison population in 2000, 2010 and 2019 wherein the Asian continent has witnessed the highest surge globally. As far as the Indian position is concerned

the below image succinctly portrays the same (Ten-country Prisons Project | World Prison Brief, 2023).

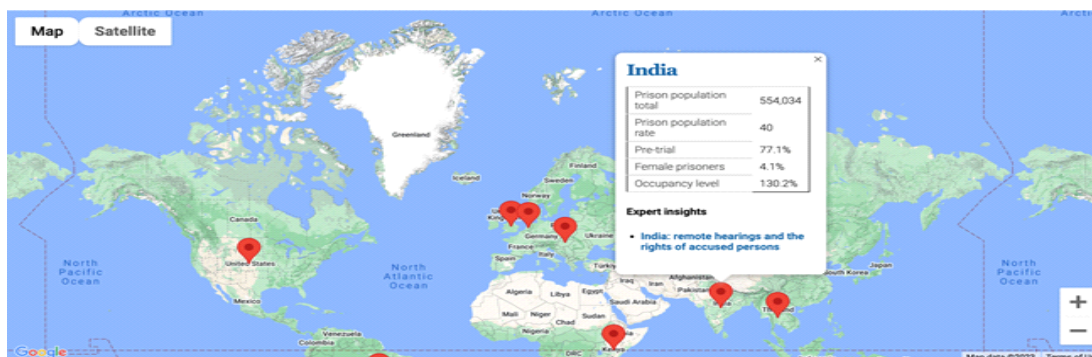


Figure 2

Source: Ten-country Prisons Project | World Prison Brief, 2023



The above data shows the incarceration level at 130.2%, which includes the pre-trial population comprising 77.1% of the total prison population. This shows an inclination towards the retributive as well as prevention model of crime prevention which raises very pertinent questions:

- Are there any fool proof strategies to prevent crime?
- Are there any policies that can lower crime rates?
- Have higher levels of incarceration lowered crime?

The answer to these questions is highly subjective as well as, there is a dearth of literature with corroborative data on the subject. However, the above data shows that there is a proclivity towards prevention over incarceration rates, despite no

credible data existing to justify its co-relation to reduced crime rates. This has spurred Police executives around the world to look towards alternative models of crime prevention. There is also a consensus that there are limitations that all Police departments face in fighting crime. There is also no evidence that incidence of crime is reduced through adherence to conventional models of policing (Skolnick & Bayley, 1986).

Deterrence model is being explored as an alternative to mitigate the incidence of crime in the society. This has led to Police executives globally from London, Oslo, Singapore, India etc. to explore community policing as a means to deter the occurrence of crime. The phrase community policing is comprised of two words, community and policing. A Google search of the meaning of these two words brings up the following results:²

The screenshot shows the Oxford Dictionary entry for the word 'community'. At the top, there are three tabs: 'Overview', 'Similar and opposite words', and 'Usage examples'. Below the word 'community', there is a section titled 'Dictionary' with a subtext 'Definitions from Oxford Languages · Learn more'. To the right of this section is a dropdown menu set to 'English & Hindi'. The word 'community' is displayed in a large font, followed by its Hindi transliteration 'क'म्युनिटी'. Below this, the word is identified as a 'noun'. Two definitions are provided: 1. 'all the people who live in a particular place, area, etc. when considered as a group' with the Hindi translation 'एक समूह के रूप में संगठित स्थान-विशेष के समस्त निवासी; समुदाय'. An example sentence is shown in a speech bubble: 'Recent increases in crime have disturbed the whole community.' 2. 'a group of people who have something in common' with the Hindi translation 'समानता-युक्त व्यक्तियों का वर्ग'. Another example sentence is shown in a speech bubble: 'the Indian community in Britain'.

Figure 3

² These are screenshots taken by the author as of June 2023, generated as a result of typing the keywords community meaning and policing meaning in Google search box.

policing :

Overview

Similar and opposite words

Usage examples

Dictionary

Definitions from Oxford Languages · Learn more

English & Hindi ▾



police

पॉलीस

verb

gerund or present participle: **policing**

to keep control in a place by using the police or a similar official group

पुलिस या इसी प्रकार के अन्य संगठन की सहायता से क़ानून और व्यवस्था बनाए रखना

The cost of policing football games is extremely high. 🔊

Figure 4

Source: These are screenshots taken by the author as of June 2023, generated as a result of typing the keywords community and policing in Google search box.

Thus, on the basis of the results above, community policing can be defined as a concept where the members of a particular group, living in a particular area are actively involved in the maintenance of law and order. The concept of community policing has been highly subjective depending upon the idea of policing existing in a particular society at a particular point of time (Allender, 2004). Conventional Police officers might envision a possibility wherein there is a transition from a formal emergency response interaction to an informal engagement with the citizens focusing on collaborating with the citizens towards the maintenance of law and order in the society. On the other hand, the members of the community might conjure up images of Police personnel engaging in one-on-one contact with the citizens, informal discussions on day to day problems encountered by the citizens. To an administrator, it is another alternative innovative model, highly pliable to generous funding for its implementation.

Thus, a precise mathematical definition of the term *community policing* is an onerous task.

Criminal investigations do not always lead to solving of crime (Skolnick & Bayley, 1988). Crimes are solved either by swift response of the Police or a Police informer or an individual who comes up with identifying the suspect. The famous detectives of Sir Arthur Canon Doyle, Holmes & Watson picked up minute traces of crime to corroborate evidence. Similarly, Police detectives obtain information from a web of informers and suspects, directly or indirectly linked to the crime to furnish evidence of crime. This shows that community plays a crucial role in solving crimes. The symbiosis of cooperation between the uniformed and the non-uniformed is the essence of community policing.

The author in the first section of the paper elaborates on the evolution and the core components of community policing. The author in the second section of the paper, through



analytical methodology, with aid of successful case studies, in India argues that community policing is not an ambiguous innovative concept but a lucid model with certain programmatic elements. Finally the author argues that there is a dire need to give statutory force to section 85 of Model Police Act that embraces the deterrent model of community policing in India.

Community Policing: Mapping the Journey to its Core Components

John E. Angell in his seminal work titled, *'Towards an alternative to the classic Police organizational arrangements :A democratic model'* elucidates that the organization of Police is structured, defined as *structural model* whose roots go back to the Anglo-Saxon era under the aegis of Metropolitan Police Act, which started the London *bobbies* in 1829 (Angell, 1971). This model is premised on the classic organizational theory which has been in place, even prior to the twentieth century (Angell). India's administrative set up being a colonial legacy, the organization of Police is premised upon this model. The salient features of this model are as under:—

- Organization of management based on a monocratic subordinate superior relationship
 - Employee status premised on his/her designation.
- However, with the changing scenario and dynamics of society, Angell (1971) suggested an alternative model based on the three pillars of flexibility, participation and sensitivity to socio-cultural setup. The model termed as *democratic policing* in Angell's terms is a departure from autocratic operationalisation of Police. It is democratic, in the sense there is participation of the two prime stakeholders of law and order, *i.e.* Police and community. The essence of the model is enhanced decision making and consensus building through increased facilitation of information exchange between the citizens and the Police. Community Policing is a blueprint of democratic policing.
- As far as India is concerned, the genesis of community policing lies in the recommendations of National Police Commission Report of 1971, particularly the Seventh Report, wherein concept of community policing has been dealt with under chapter IX titled Home Guards (Government of India, 2005). The major recommendations were:-
- A formal centralized hierarchical chain of command
 - Division of labour based on functional specialisation
 - A Standard Operating Procedure (hereinafter referred to as SOP) for every activity.
 - Pre-charted career routes with a common entry point and promotions based on an impersonal appraisal system by the superior.
 - Supplement the Police force through use of Home Guards
 - Enhanced facilitation of community in policing through their use.
 - They would aid in mitigating crime at a micro level being local residents
 - They would serve for a period of three years
 - Voluntary participation



Further, the Padmanabhaiah Committee on Police Reforms recommended the community policing through the use of *village policing* (Government of India, 2005). On the lines of the recommendations, a Model Police Act of 2006 was drafted which under Section 85³ and Section 86⁴ provides for community policing in the form of Community Liason Groups. In lieu of the same, the Government of India (hereinafter referred to as GOI) set up National Police Mission with six Micro Missions (hereinafter referred to as MM) under its ambit. MM 2 deals with community policing through operation of decentralized beat policing system (Choudhary & Bureau of Police Research & Development, 2012). Furthermore, the Bureau of Police Research & Development has undertaken a number of projects under MM2 for senior citizens, slums, women, children to strengthen the foundations of community policing, recommending several interventions to the states under the aegis of Police-Community Partnership,

an umbrella mode of community policing (Bureau of Police Research & Development, 2019).

Thus, the twin pillars of community policing as under:

■ Community Partnership

A symbiotic relationship with the community where Police and community are co-producers of crime prevention is the fundamental premise of community policing. It is a partnership that transcends conventional methods of law enforcement. Instances of cooperation can be provisions for emergency medical services, helping traffic accident victims, coordination with Resident Welfare Associations in betterment of neighborhood and localities etc. The same can be illustrated as under (Bureau of Justice Assistance, 1994).

³Community Liason Group The District Superintendent of Police shall constitute a Community Liaison Group for each Police Station, comprising respectable local residents of the area with unimpeachable character and antecedents, including retired public servants and heads of teaching institutions, if any, as representatives of the community, to generally advise the Police in their functioning. The Community Liaison Group shall have a fair representation of gender, and all other segments and professions, of the society in villages falling in the Police Station area. The Community Liaison Group shall have two representatives nominated by each Panchayat Samiti in the jurisdiction of the concerned Police Station from amongst its members:

Provided that no person convicted by a court of law or against whom charges have been framed by a court of law in a criminal case, or dismissed, removed, discharged or compulsorily retired from any employment on grounds of corruption, moral turpitude or misconduct shall be eligible to be inducted into the Community Liaison Group.

Provided further that no person who is connected with any political party or an organisation allied to a political party, other than the nominated representatives of the Panchayat Samitis, shall be eligible to be inducted into the Community Liaison Group.

⁴The Community Liaison Group will identify the existing and emerging policing needs of the area, which will be taken into consideration by the Station House Officer while preparing the annual policing strategy and action plan for his jurisdiction, for submission to the District superintendent of Police. The Community Liaison Group shall perform such other functions as prescribed. It will meet as frequently as necessary, and at least once in each quarter of a year. The meetings of the Community Liaison Group shall be attended by the Sub-Divisional Magistrate and Sub-Divisional Police Officer as well as the officer in charge of the Police Station and the Circle Inspector. The meetings shall be open to public.

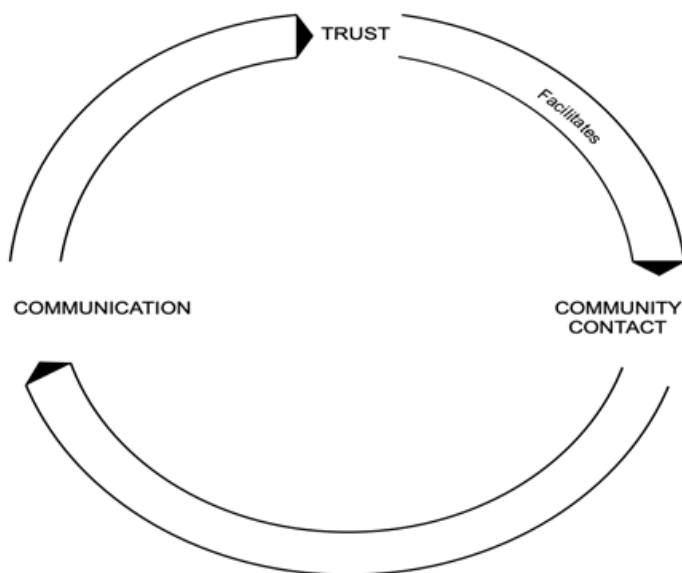


Figure 5

Source: Bureau of Justice Assistance, Office of Justice Programs, US Department of Justice

■ Problem Solving

Problems are a manifestation of the socio cultural context in which they are set in. They depend upon variables such as the kind of people involved, the social circumstances surrounding them, their environment etc. Thus, every incident is unique. For example, the residents of a dilapidated apartment complex, with a dearth of basic necessities might resort to burglaries, vandalism, harassing pedestrians in the adjacent areas (Eck, 1987). Thus, problem solving involves careful examination of the demography and geography of the area compounded by the problem and channelising the resources accordingly to solve the same. The same can be illustrated as under (Bureau of Justice Assistance, 1994)

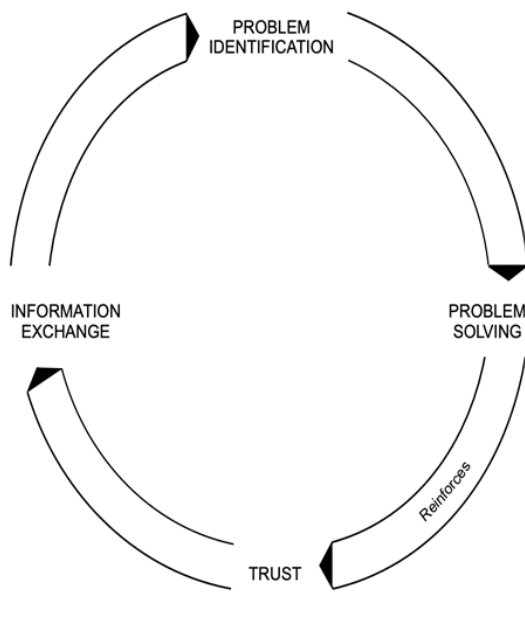


Figure 6

Source: Bureau of Justice Assistance, Office of Justice Programs, US Department of Justice

After an insight into the evolution of community policing globally as well as in India along with an elucidation of its core components, the author shall cite successful case studies of MM2 in India as well as other jurisdictions with corroborative evidence that community policing aids in better maintenance of law and order.

Community Policing as a Pragmatic Model of Crime Prevention: An Analysis

According to Crime in India Report 2021 published by National Crime Records Bureau (hereinafter referred to as NCRB), GOI, the various states and union territories of India witnessed 60,96,310 registration of cognizable crimes, out of which 36,63,360 were under the Indian Penal Code (hereinafter referred to as IPC) and 24,32,950 under Special and Local Laws (hereinafter referred to as SLL) (National Crime Records Bureau, 2022). As far

as Metropolitan cities are concerned, out of 9,52,273 cognizable crimes registered, 6,30,937 crimes were under IPC and 3,21,336 crimes under SLL (National Crime Records Bureau, 2022). The crime rate witnessed an increase of 3.1% in comparison to 2020 in metropolitan areas. These figures highlight that there is a need to engage in alternative models of policing, a detour from conventional methods to reduce rates of crime.

The success of alternative model of community policing can also be seen from a case study of Chittoor district (Digital, 2019). The Chittoor district Police along with the residents had launched a programme of community policing. The new division which was launched on January 25, 2016 since its inception has witnessed positive developments in the form of reduced crime rates. There has been a 17% decrease in road accidents, 2.4% and 1.2% reduction in property related



Image 1

Source : Janaagraha Centre for Citizenship and Democracy & Bengaluru Police. (2019). Kerala's Janamaithri Suraksha Project. Janaagraha. <https://www.janaagraha.org/files/publications/Handbook-on-Community-Policing-2019.pdf>

crimes as well as crimes against women. These developments have been as a result of increasing camaraderie between the Police and citizens (Digital). Furthermore, Kerala's Janamaithri Suraksha Project is touted as one of the best practices of community policing in the country (Janaagraha Centre for Citizenship and Democracy & Bengaluru Police, 2019).

The project whose roots go back to 2008 was initiated to make Police and the society, consortium in prevention of crime. The same has been done through Beat Officers and Janamaithri Suraksha Committees. Another successful community policing programme is of Chattisgarh Police (Student Police Cadet Programme, n.d.)



Our Bastar-Our Police

Image 2

Source: Student Police Cadet Programme. (n.d.). Community Policing in India [Slide show]. https://spc.gov.in/SPC-Training-presentations?s_ppt=PO637714618678830904

The programme launched in 2009 aimed at reaching out to the villagers of Bastar district with the aim to combat the scourge of Naxalism with the cooperation of the local community. There are

several successful initiatives of community policing across the country (Janaagraha Centre for Citizenship and Democracy & Bengaluru Police, 2019).

**Community Policing Initiatives-A few Examples³**

City/State	Program/ Scheme	Year	Short description
Haryana (Gurugram)	Community Policing 2.0	2015	The Gurugram Police launched a Community Policing initiative through a portal, wherein police and city residents are connected with each other, this allows people alert the rest of the community in case of an emergency or raise common issues and bring them to the notice of both police and the community.
Kerala	Janamaithri Suraksha Project	2008	This project is an initiative of the Kerala Police to facilitate greater accessibility, close interaction and better understanding between the police and local communities. This is regarded as the most well-established community policing initiative in India.

Figure 7

Source: Janaagraha Centre for Citizenship and Democracy & Bengaluru Police. (2019) Kerala's Janamaithri Suraksha Project. Janaagraha. <https://www.janaagraha.org.files/publications/Handbook-on-community-Policing-2019.pdf>

City/State	Program/ Scheme	Year	Short description
West Bengal (Kolkata)	Community Policing initiative	1997	Citizens were involved in drug awareness programs. sports activities, nabadisha, a program for street children; Prabaha, a program for blood donation. Bravery and Honesty Award organized by the Detective Department; Counseling Centres, Chaude Martin Fund for ex prisoners. Police Assistance booths.
Assam (Guwahati)	Nagarik Committees	2001	A comprehensive plan for meaningful participation of the public in policing in Guwahati City was drawn up and implemented in a successful manner.
Himachal Pradesh	Vishwas Yojana Suvidha Yojna Sanrakshan Yojana	2000	The program included visits of school children to police station; production of educative, documentary films; village touring by district Superintendent of police; police assistance centres; training in unarmed combat by police teams for girl students; police volunteers visit residences of elderly citizens living alone.



City/State	Program/ Scheme	Year	Short description
Tamil Nadu	Friends of Police	1993	Citizens contribute to the prevention and detection of crime through test and night patrols, assistance in traffic and law and order maintenance, crime prevention, information collection and involvement in prohibition work.
Maharashtra (Mumbai)	Mohalla Committee Movement Trust	1994	Committee member maintain cordial relations between Hindus and Muslims through meetings and liaison with the nearest police station.

Figure 8

Source: Janaagraha Centre for Citizenship and Democracy & Bengaluru Police. (2019). Kerala's Janamaithri Suraksha Project. Janaagraha. <https://www.janaagraha.org/files/publications/Handbook-on-Community-Policing-2019.pdf>

Thus, an analysis of the various models of community policing across the country, brings out certain coherent programmatic elements of community policing which Skolnick and Bayley (1988) have also enunciated. The same are as under:-

- Community and Police as consortium of crime prevention
- Remodelling the traditional patrol model to cater to non-emergency services, as is the case of Beat Officers in India in various models of community policing.
- Accountability to the Public
- Transition to a decentralized command structure

Thus, community policing as a concept leads to increased grass-root support to the Police from the public, uplifts the morale of the Police and instils

an increased sense of satisfaction as well as confidence.

Conclusion and Suggestion

The manifestation of good intentions into robust programmes as outlined above, shows that community policing is a coherent programme with impressive benefits to the community as well as the Police. It is an innovative model of Police professionalism as touted by David Bayley, the doyen of community policing. Given the success of community policing programmes across the country, the same needs to be implemented as a uniform exercise throughout the nation. According to the 237th report of Standing Committee on Home Affairs, the Mooshahary Committee also emphasised on community policing to aid the Police personnel in discharge of non core and non policing activities. The response of the States to the same is as under (DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE ON HOME AFFAIRS, 2022)

Fully Implemented	Partially implemented	Accepted but no action initiated	Under Consideration
Himachal Pradesh, Madhya Pradesh (Community Policing system implemented), Andaman & Nicobar Islands.	Tamil Nadu, Delhi Chandigarh, Jammu & Kashmir	Nagaland, Uttarakhand, Sikkim, Manipur, Dadra & Nagar Haveli, Punjab	Bihar, Meghalaya Mizoram, Goa, Gujarat, Maharashtra

Figure 9

Source : Department-related Parliamentary Standing Committee on Home Affairs. (2022). Two hundred thirty seventh report on Police - Training, Modernisation and Reforms. In Sansad.in (No. 237). Rajya Sabha Secretariat, New Delhi.

The major reason for lack of uniformity across the country is that Police being a state subject falls under the seventh schedule of the Constitution. The prime responsibility falls on the states to make the programme a success. The same can be done on the lines of the state of Madhya Pradesh that has given statutory force to the model of community policing through the Madhya Pradesh Gram Thatha Nagar Raksha Samiti Act (Choudhary & Bureau of Police Research & Development, 2012). Thus, there is a dire need to give statutory force to the concept of community policing in India.

In the words of David Bayley, '*Community policing cuts across the grain of accepted Police practice.*'

Finally, to conclude with the words of Dr. Manmohan Singh:

"The Police... must be viewed as friends of the people, of ordinary, honest citizens, even as they instill fear in lawbreakers. The basis of Police authority cannot be mere law; it has to be trust of the community as well."

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Psychological and Lifestyle Characteristics of Victims of Sexual Abuse before and after the Abuse



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Abstract

Sexual abuse is gradually becoming a serious concern all around the world and especially in India, where the National Crime Record Bureau (NCRB) reported the data base on sexual offenses, which showed exponential growth from 2011 to 2016. Reporting of the cases of sexual abuse had not stopped, though there was a nationwide lockdown. One reason reported for this is that most of these have been committed by someone known to the victim. 16 cases of rape and 64 cases of molestation were reported in J&K, while 21 cases of rape have been reported in Delhi. The country-wise data on sexual abuse had not yet been reported. In order to prevent crime, we must spend more time investigating the circumstances that led to the crime. But most of the studies conducted to date have focused more on studying the offender and other related circumstances, and very few of them have studied victims of sexual abuse. Up until now, we had gathered a little intel about the victim's characteristics and the circumstances that led to the crime being committed against them. This study aims to explore the pattern and characteristics of the victims of sexual offences that increase the chances of victim vulnerability, victimization, and victim precipitation for that particular crime committed against them. This study included 20 participants who had experienced sexual abuse and gave consent to having their experiences with the crime analysed for this study. The results showed that there was an association between the victim's temperament (calm and short-tempered) and attitude (hostile, suspicious, cooperative, defensive and others) and the offender's mental characteristics (angry, aggressive, hypersexual and frustrated). There was a change in the victim's mental and lifestyle characteristics before and after the sexual abuse. There were changes in self-confidence, attitude, mood, area where they used to work or go to college, the distance between their home and place of employment and the mode of transportation they choose to use now.

Keywords: NCRB data, victimization, victim vulnerability, victim precipitation and routine activity theory.

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Introduction and review of literature

The rising trend of sexual offences has become a matter of great concern for the authorities. Not only are the conventional sexual offences there to be seen, but the emergence of new dimensions of sexual offences and offenders (e.g., juveniles committing heinous sexual offences and the increasing level of cruelty in sexual offences) is quite a hassle for the people in the world. Even victims of sexual offences do not belong to a specific age group or population. At present, from infants to elderly people, from females to men, anybody can be the victim of a sexual offense, which suggests that the vulnerability of individuals to becoming victims of any kind of sexual offence has an extensive range to study. Though the range of offenders is also not lacking when it comes to who is more susceptible to committing the crime. Just as anyone who can be victimised does not have a well-defined pattern and characteristics, the offenders who can commit the crime do not either. Some studies suggested that individuals in the age group of 16-19 were more vulnerable to sexual assaults (60.8%), mostly at night (53.23%), inside the house (87%), and usually done by their acquaintances (61%). "The same study suggests that the majority of the victims were unmarried (84.7%), lived in rural areas (65.2%), were unemployed (93.5%), belonged to the less educated or illiterate groups (88%) and were found to be mentally fit (97.5%)" (Sahu).

The National Crime Record Bureau (NCRB) had reported the data base on sexual offenses, which showed exponential growth from 2011 to 2016. States and UTs cases had increased from 2011 to 2016. The outrageous growth from "24206 cases in 2011 to 38947 cases in 2016 of criminal assault to outrage the modesty of women had increased from 42968 cases in 2011 to 84746 cases in 2016, and further to the statistics, 36022 cases were registered under the POCSO Act in 2016, which show the pathetic condition of the country" (Kumar).

Statistics from studies on the subject show that the primary focus was almost always on the offenders. The major drawback of these studies was that, to study the offenders, there was a lack of access to them, and studies could only be conducted once the offender had been proven guilty. Hence, we require a different approach that requires studying the victim's patterns and characteristics before committing a sexual offence.

"Nothing just happens: every action has a set of pre-existing sets of circumstances that lead to subsequent sets of circumstances" (Gardner). This study was needed to explore these patterns and characteristics in order to prepare an intervention module and spread awareness to stop victimization. To understand how victimisation occurred, we must first understand what victimisation is and the other factors that contribute to it.

A. Victimization

When a victim falls prey to a crime, this is known as the victimization. Victimization may be encountered by an individual, or his family, group or the community. Mendelssohn, Von Hentig and Wolfgang previously used the term victim precipitation for the victims who they considered as "hapless dupes" who were responsible for their own victimization.

B. Victim precipitation

Victim precipitation implies the notion that the "victim has something to do with his or her own victimization, i.e., the victim has somehow contributed to his or her own situation, which made them fall prey to the crime that was committed against them" (Schafer). Victimization, on the other hand, is frequently associated with a negative concept and is regarded as victim blaming. As a result, recent studies, rather than using the word "victimization," emphasise victim vulnerability due to its positive connotation when studying crime

victims.

Several studies had been conducted that tried to compare the personality characteristics, life style, attitudes, clothing style and life experiences of women who were sexually assaulted or had been the victims of sexual offences with those of women who had not gone through any such type of experience. In a study conducted in 2001, it was found that "women who have been sexually assaulted have often experienced childhood sexual abuse, frequent sexual relationships and are likely to be heavy drinkers" (Abbey et al.). Some of the victims who had suffered childhood sexual abuse turned to a drinking habit and an early and frequent sexual relationship as a method of coping with stress and negative emotions. There was a high probability that "those victims are also more likely to consume alcohol in a possible sexual situation as a method of coping with their unsure feelings about intercourse." In return, drinking in possible sexual situations enhances their risk of being sexually assaulted, as they seem to be an easy target and also because the women are less likely to be able to resist (Abbey et al.).

Another study suggested that among the American population, around "25% of American women have experienced sexual assault, which also includes rape and one-half of these cases involve alcohol consumption by the offender, victim or both." Alcohol consumption reduced the critical evaluation ability of the mind, which was responsible for processing any existing risk factors involved in any situation. Hence, alcohol consumption was also found to be a contributing factor to the sexual offences. There were some common types of sexually abusive behavior, such as "joking about women and sex in the presence of the victim, sexually criticising the victims, touching victims against their wishes, using threats, calling the victim names and so on" (Abbey et al.). The list is ongoing. This study is a step towards studying the possible pre-existing circumstances,

patterns, and characteristics that lead to sexual offences.

C. Victim vulnerability

The word "vulnerability" denotes the susceptibility of a person to being victimised (falling prey to a crime), though the victim does not share the responsibility of their victimization. For example, does age matter in victimization, or are women more susceptible to being victimised for certain types of crimes than men?

Ms. Monika Jain and Dr. Priyanka Kacker conducted a study to understand the violence in dating relationships among young adults. The violence was studied in three different aspects: physical, sexual and emotional. A questionnaire with 63 items was created for the study and distributed to 155 college students ranging in the age group of 19 to 24 years. Results of the study showed that the young adults were facing violence in their dating relationships. Among the three aspects, 66.4% of young adults experienced physical violence, 36% experienced emotional violence and 18.96% experienced sexual violence and it was the emotional support they received from their dating partners that kept the young adults in the relationship even after they faced violence in their relationship.

A research conducted by Shubhangi Srivastava on "Bullying and Sexual Harassment at the Workplace" suggested that the existence of bullying positively correlates (.502) with sexual harassment at the workplace, whereas both bullying (-.385) and sexual harassment (-.523) negatively correlate with age. The research also concluded that there was a significant difference between bullying at an academic workplace and an industrial workplace. The difference in bullying and sexual harassment between two workplaces may be due to differences in the workplace environment.



Another study conducted by Aditya Sundaray studied the effects of isolation among married Indian couples who developed sadistic tendencies. The study was carried out while the country was under lockdown and the entire country was paralyzed. The aim of this study focused on understanding the impact of the COVID-19 pandemic on the psychological well-being of married individuals who had no social contact from the outside world and have been working from home. Hence, assessing the possibilities of married individuals developing sadistic tendencies against their spouses under the influence of anxiety-based sadism could help determine the prevalence of antagonistic social anxiety among the Indian population. The results shown by both the scales (Zung Self-Rating Anxiety Scale and Variety of Sadistic Tendencies) in determining anxiety and sadism in married couples could be said to be majorly significant to the cognitively based predictions in determining the sadistic tendencies.

The findings suggested that there is a positive correlation between the anxiety and sadistic tendencies in male partners (0.514), while there was no correlation between the anxiety and sadistic tendencies in female partners, which indicates that the anxiety of the male partner in a marriage had a strong role to play in developing the sadistic tendencies.

A review study conducted by Ruwab Khemchandani and Dr. Kacker studied the literature available on post-traumatic stress disorder (PTSD) and domestic violence. It was discovered that those suffering from PTSD and victims of domestic violence are more vulnerable to a variety of physical and mental health risks. A comprehensive treatment could be provided to those who were suffering after understanding their experience of PTSD or domestic violence and providing help in accordance with their individual experience. To investigate the Brain Electrical Oscillations

Signature (BEOS) system, a neuro signature system, could be used to investigate neuronal activation following the experience of trauma or domestic violence in order to better understand both experiences and to gain a better understanding of the parts of the brain that are more affected by it. This could also facilitate the treatment provided to people suffering from PTSD and victims of domestic violence.

All of the studies to which the authors have referred to had a significant gap in their research timeline. One possible explanation for this is that sexual abuse is a very sensitive topic and needs to be dealt with full care and upright ethics, which takes patience and time. The second explanation that seems to be the reason for it remaining untouched or only partially touched is that, many times, talking to the victim or offender of sexual abuse can be very challenging. Among the studies that have been done on sexual abuse, most of them have focused more on understanding the offender and their characteristics than on knowing the statistics of sexual abuse. There are very few studies on understanding the victim, and even fewer studies that have tried to explore the pattern and characteristics a victim exhibits that have made him or her fall for the crime without their awareness. This study tried to focus more on the victims and the perspectives related to them.

Hypotheses

- H_0 : There is no significant difference between the mental and life style characteristics of the victim before and after the incident (sexual abuse).
- H_{01} : The selection of victim as per victim's mental characteristics is independent of offender's mental characteristics.

Rationale of the Study

1. To explore the patterns of the victims of sexual offences and common reasons for victimization as per victims



2. To explore the characteristics of the victims of sexual offences before and after the incident
3. To study the relationship between Victim's characteristics and Offender's Characteristics.

Methodology

A. Participants

Total sample of 20 participants were selected with the help of purposive sampling method who were ready to be the part of the study.

Inclusion criteria

- Participant must have experienced any kind of sexual abuse in his/her life and
- He/she must be willing to share the experience as a part of the research.

Exclusion criteria

- Participant who had not experienced any kind of sexual abuse in his/her life and
- He/she was not willing to share the experience as a part of the research.

B. Material/Instrument

For the purpose of this research, a semi structured questionnaire was prepared to interview the participants with some specific questions related to the incident, victim and offender. The question prepared for victims included various segments in which the first segment was asking 1) the Demographic details of the victim of sexual abuse which included other instruments to allow participants to self-identify their gender, race, and year of birth and other significant information which was then followed by, 2) Detailed questions about the recent incident of sexual abuse, 3) History of abuse prior to the incident (sexual/physical), 4) History of recent offence, 5) Questions on the physical characteristics, mental status and life style

characteristics of the victim before the incident (Past), 6) Questions on the physical characteristics, mental status and life style characteristics of the victim after the incident (Present), 7) Information/ Details/ Characteristics/ Events about the offender, and question about 8) the Reasons as per the victim for being victimized and reaction to the offence.

Procedure

Participants for this study were selected on the primary condition that they must had experienced any kind of sexual abuse in their life and were willing to share that experience as a part of the research. First the instructions were given to the participant which were as follows

Instructions

1. The purpose of this questionnaire is to understand about the nature of offence you have undergone and to know the reasons of being victimized.
2. There is no right or wrong answer.
3. Please answer all the questions based on your experience of being a victim of the offence.
4. The information collected will be kept confidential and will be used only for the research purpose.

Participants were also given an informed consent form and advised that their participation was voluntary, anonymous, and they could end participation at any time. After this consent was obtained. Some interviews were administered in-person and some over telephone. The time allotted for completion of the questionnaire and interview was originally planned for roughly thirty to forty-five minutes. Participants were advised the nature of the study and what the data would be used for, as well as contact information regarding results of the study. The data was collected in the following



manner. First, participants were given a semi- structured questionnaire that was prepared for the study. demographics questionnaire to complete and then for the study. were asked various questions according to the

Results and Discussion

Table 1: Victim's characteristics before and after the incident

Dimensions	Sub dimensions	Characteristics	Frequency before the incident	Frequency after the incident	Fisher Exact Sig. (2-sided)
Mental characteristics	Self confidence	Low	6	4	0.03
		Medium	9	9	
		High	5	7	
	Attitude	Hostile	3	2	0.050
		Suspicious	4	4	
		Cooperative	8	10	
		Defensive	3	4	
		Other	2	0	
	Mood	Depressed	3	3	0.036
		Fearful	3	1	
		Anxious	3	9	
		Cheerful	10	1	
		Other	1	6	
	Area where worked or went to college were?	In the city	14	16	0.015
		Outskirt of the city	2	2	
		Another city	2	2	
		Other state	2	0	
Life style characteristics	Distance of office/college from home	Within 2 km	6	3	0.027
		2km-8km	4	9	
		More than 8km	10	8	
	Mode of transport using	Cab	5	4	0.020
		Own vehicle	6	8	
		Walking	3	3	
		Other	6	5	

Table 1 showed that there was a change in the mental and lifestyle characteristics of the victim, before and after the sexual abuse. There were changes in self-confidence, attitude, mood, the area where they used to work or go to college, the distance between their home and place of employment and the mode of transportation they

choose to use now. There was an decrease in the victim's confidence after the incident as compared to the confidence they possessed before the sexual abuse. There were many NGOs that were outspoken about the issues of sexual abuse in India and across the globe. Even India's judicial system amended the Criminal Law (Amendment, 2013) Act.

Following the horrifying case of Delhi (Nirbhaya Rape Case, 2012), many efforts were made to remove the stigma associated with sexual abuse victims.

In terms of attitude, victims had become more cooperative (10) and less hostile (2) after the incident. The victim's cooperative attitude assisted her in coping with the trauma caused by the incident, and it had been observed that being cooperative sometimes assisted her in escaping the situation without grave danger to her life. Being cooperative also helped in buying time for the escape as well as in psychological defence. "The victim reported struggling and fighting with their assailants to avoid penetration until I realized he was going to rape me, and struggling and fighting were exactly what the offender wanted, and the more I struggled and fought, the more he would get excited," according to the United States Congress.

The incident had a negative impact on the victims mood, and they became less cheerful (9), but they also remained in other moods (6), which they couldn't define and were inconsistent with. The

victim may have displayed different reactions such as being "expressive and tearful, quiet and controlled, distressed, shocked or in denial," and the victim's initial reaction to the incident included "anxiety, tearfulness, shame, physical revulsion and helplessness" (Mason). These reactions as well as the uncertainty of each victim responding differently, were possible causes of the other moods in the study's victims.

In terms of work, victims now prefer to work in their own hometown, within the city (16) or on the outskirts of the city (2), and prefer less to work in another city (2). Even the victims distance had increased to between 2 and 8 kilometres (9). But this could be because of the requirements of the job and other factors associated with their professional career. More victims used their own vehicle as the mode of transport (8), as they preferred it to any other mode of transport as being safe, especially after the Nirbhaya Rape Case (2012), when public transport became less of a choice of transport for people who felt vulnerable in these situations.

Table 2: Offender's behavior and Victim's characteristics before and after the incident

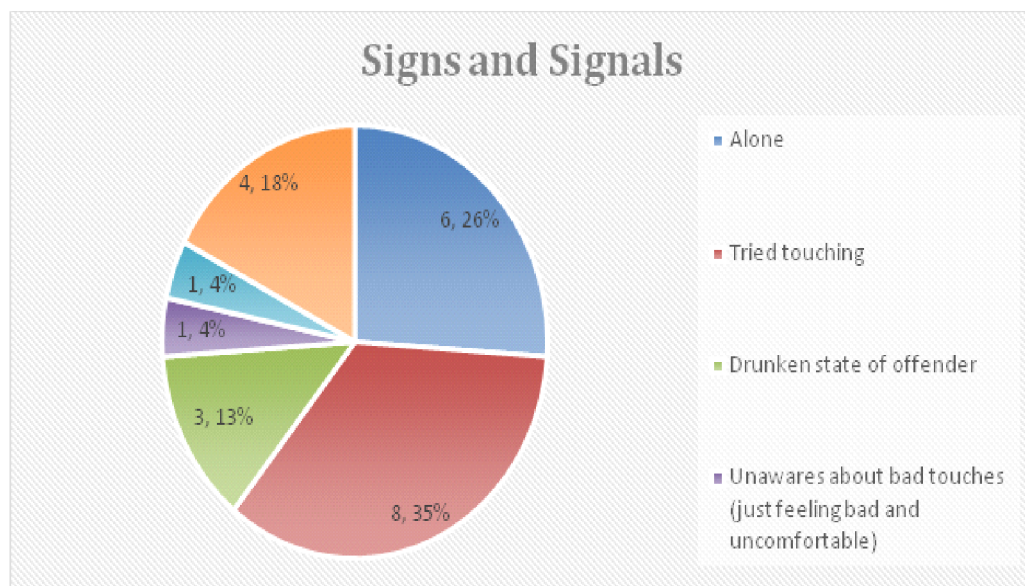
Dimensions	Sub dimensions	Frequency	Fisher Exact Sig. (2-sided)
Offender's behavior	Angry	1	0.035
	Aggressive	7	
	Hypersexual	11	
	Frustrated	1	
Victim's Temperament	Aggressive	7	
	Hypersexual	11	
Victim's Attitude	Frustrated	1	0.045
	Suspicious	4	
	Cooperative	8	
	Defensive	3	
	Other	2	
Offender's behavior	Angry	1	
	Aggressive	7	
	Hypersexual	11	
	Frustrated	1	



Apparently, few studies were available that solely studied the characteristics of victims of sexual abuse. Table 2 showed that there was an association between the victim's temperament (calm and short-tempered) and the offender's mental characteristics (angry, aggressive, hypersexual, and frustrated). Victims who were studied for the study were mostly calm-tempered (13), and they were attacked by more aggressive (7) and hypersexual (6) offenders, while victims who were short-tempered (7) were attacked by angry (1), hypersexual (5), and frustrated (1) offenders, which suggested that calm victims were more likely to be the victims of sexual abuse. This was supported by one of the studies conducted on the offenders, which stated one of the offender's statements that read, "Every time I've offended, I've always tried to make it as peaceful and non-violent as possible" (Valliere). Another association was found between the attitude (hostile, suspicious, cooperative, defensive, and others) of the victim and the offender's mental characteristics (angry, aggressive,

hypersexual, and frustrated). Cooperative victims were more vulnerable to sexual offences as compared to others. This association had two possible explanations. The first could be that offenders were more likely to attack cooperative victims as, in most of the cases, victims were known to the offender and the offender knew more about the victim and his or her characteristics. A second reason could be that victims were cooperative so that they could escape the situation without going through "fiery hell," which could be the possible consequence if they didn't act cooperative. A 14-year-old victim was sexually assaulted by her stepfather after he murdered her mother. He assaulted her while her mother lay dying next to her in the bed. The victim watched the movie with him and did not call for help. She got up frequently throughout the movie and gathered some clothing, medication, and her siblings. Despite her shock, she attempted to calm her stepfather and protect her siblings and herself by acting cooperative" (Valliere).

Chart- Signals that victim noticed before the incident



Out of the 20 victims, some victims noticed a combination of signals that appeared to be obnoxious and led to the offense, according to the victim. Sixty percent of victims think that they ignored the fact that they were asked whether they were alone or not by the offender before their visit or were alone with the offender when they knew that the offender did not have good intentions for the victim. 8 (40%) victims said that the offender had previously tried to touch the victim and they had let it pass without giving any warning to the offender. 3 (15%) victims thought that they ignored the fact that the offender was drunk when they let them visit or when they were alone. One (5%) victim reported that he or she was not aware whether the act was bad or not; he or she just did not feel comfortable but did not know what was wrong. One (5%) victim reported that the offender was constantly staring at them, and the victim did nothing about it. Four (20%) victims reported that they did not notice any signs that led to the offence.

As initially claimed by many people in their statement, clothes could be one of the problems causing rape. We found nothing significant that associates clothes with the cause of the problem. At the time of the incident, the majority of the victims were dressed in jeans and a t-shirt and were fully clothed. In fact, Indian artist and activist Jasmeen Patheja collects clothes donated by victims as a testament to the fact that they are not to blame. She had collected a variety of clothes till now, which included everything from dresses to sarees to burkhas and all of them denote that clothes are not the ones to be blamed for the incident.

Conclusion

This study has laid the foundation with some initial understanding of various factors and patterns that can be the reason for a slippery slope. There are numerous possible explanations for the study's factors, but nothing can be definitively determined

as one factor solely responsible for why one person becomes a victim of a specific crime. More research is needed that focuses on a specific aspect of the victim, such as their physical, social, psychological, or daily routine. A study suggested that victimisation could be prevented if there was empowerment of women at different levels of development, which are: a) empowerment at the personal level (education, decision-making, nutrition, health, sanitization, housing, etc.), b) empowerment at the professional level (labour pattern, access to and control over resources, self-employment and self-help groups, etc.) and c) empowerment at the interpersonal level (mobility and social interaction, change in mentality towards women, etc.) (Sanger).

In conceptualising the creation of an app called the DESIRE app on the basis of phases for the prevention of rape based on the injury prevention strategy developed by Frances J. Mantak, Swetha Sadanandan discussed the roles of various agencies and manpower in order to prevent victimization. She had defined the roles of criminologists, police agencies, and education portals. The goal of the app DESIRE is to regulate the impulse or intention to engage in any criminal activity by providing counselling to anyone who feels compelled to commit a crime or who is unable to control his impulse and may commit a crime. The app forms a platform for the criminologist and the person to have a real-time interaction before something happens that might harm the person as well as others. This framework is an attempt to shift the general understanding and concept of sex and sexual desires by promoting healthy alternatives through the development of an all-inclusive app in order to focus more on preventing victimisation from the perpetrator's side.

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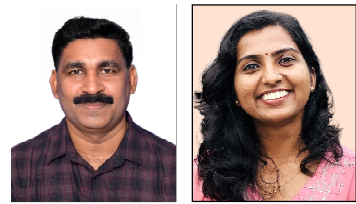
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Suicidal Ideation and Perceived Social Support among Police Personnel

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Abstract

Suicide and suicidal ideation are serious issues of concern among behavioural science researchers all over the world due to its multifaceted impact. Suicide was recognised as a public health priority by the WHO about two decades ago, and the reduction of the suicide rate was included in the Sustainable Development Goals to be accomplished by 2030 (WHO, 2014). Completed suicides and attempted suicides, as well as homicidal deaths, among Police and military personnel have been more common in recent years. Considering this situation, the study examined the relationship between suicidal ideation and perceived social support among Police personnel of Kerala state, India. The sample for the study consisted of 95 Police personnel drawn from different districts of the state, through the convenience sampling method. The objectives of the study were (a) to assess the extent of suicidal ideation among Police personnel, (b) to assess the nature and extent of perceived social support among Police personnel and (c) to find out the relationship between suicidal ideation and perceived social support. The suicidal ideation scale and multi-dimensional scale of perceived social support were used to assess the suicidal ideation and perceived social support, respectively. The collected data was analysed by Spearman's Rank-Order correlation along with the measures of central tendencies. Suicidal ideation and perceived social support had a strong negative correlation, according to the findings. Furthermore, Police personnel have an average level of suicidal ideation and a moderate level of perceived social support.

Keywords: Suicidal Ideation , Perceived Social Support, Police Personnel

Introduction

Police personnel have an inevitable role in maintaining the disciplinary and legislative homeostasis of society. The stress they are experiencing is increasingly recognised as a global issue of grave concern (Kar & Singh, 2015). There are various factors that

contribute to the stress experienced by Police officers. The working environment and the unpredictable nature of their job are most important among them (He, Zhao & Archbold, 2002; Violanti & Aron, 1993). Physical dangers involved in the job, use of force, confronting ambiguous situations

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and also the shift work, do contribute in this regard (Brown & Campbell, 1994; Hart, Wearing & Headey, 1995). Major predictors of stress among the Police personnel were identified as traumatic work exposure and Post Traumatic Stress Disorder (PTSD) symptomatology (Violanti, 2004). Administrative factors such as strong hierarchic adherence are also identified as a strong predictor of stress besides the nature of their work (Morash, Kwak, Dae-Hoon & Haarr, 2006). In addition, stress was found to be predicted by work overload, long working hours, job insecurity, lack of fairness at the workplace, lack of participation in decision making, poor compensation and benefits, lack of resources for investigation, poor relation with public and media (Kumar, Kamalanabhan, 2017). A major point to be noted is that stress is a significant contributor to suicide (Miller et al., 2017).

Suicide and suicidal ideation are serious issues of concern due to its multifaceted impact. According to the World Health Organization (2018), "Suicidal behaviour encompasses a wide variety of behaviours such as contemplating suicide (or ideation), preparing for the suicidal act, attempting suicide, and committing suicide". According to the Centre for Disease Control and Prevention (2018), "Suicide is when people direct violence at themselves with the intent to end their lives, and they die as a result of their actions". Whereas Suicidal ideation refers to the thoughts of committing suicide or engaging in suicidal behaviour. As per the report of the World Health Organization (WHO), "almost 8, 00,000 people die by suicide each year or 1 in every 40 seconds globally. In India, the suicide mortality rate per lakh population is 16.3 (WHO, 2018)". The report of The National Crime Records Bureau (NCRB) reported that the regional average is above 15 per lakh and the rate of suicide of India was 11.4 per lakh population which equates to

1, 33,623 deaths registered as a suicide. Whereas the global average is 10.6 per lakh (NCRB, 2015). This indicates that India's suicide mortality rate is more than the average rate of the world. All these suggest, the need for special attention towards the prevention of suicide for the better health and well-being of the people of India in general and the personnel in the forces in particular.

The actual rate of suicide may be even more than the reported suicide cases, since many of the cases are left unreported. Similarly, in Kerala, the number of suicides during 2015 was 7,692 and the rate of suicide was 22.6 per lakh, whereas the rate for 2014 was 24.9 per lakh and the total number of suicides was 8446 (NCRB, 2015). Suicides can be prevented in a variety of ways. The most critical step is to recognise a person's suicidal propensity. This can be accomplished by observing the individual's warning indications. Effective health care, life skills, self-esteem, a feeling of purpose or meaning in life, and a sense of connectedness with individuals, families, communities, and social institutions are some of the other ways to prevent suicide. Therefore, suicide prevention involves not just professionals but also individuals, their families, friends, and other members of the community.

Connectedness with others and social support from the workplace, family, others and the community are important factors to prevent suicide and suicidal behaviour. Social support is the feedback provided to individuals through contact with similar and valued peers (Guntern, 1985). Albrecht and Adelman (1987) defined social support as "verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other or the relationship and functions to enhance the perception of personal control in one's life experience". According to Caplan (1974), "the support systems assist the individual in mobilising his/her psychological



resources and mastering their psychological/emotional hardships; support systems also share his/her responsibilities and provide them with additional funds, equipment, tools, skills, and cognitive guidance to help him handle circumstances better". The behaviour that is intended to be supportive, or could potentially be supportive, is not necessarily regarded as such (Wortman & Lehman, 1985). There comes the importance of perceived social support. Furthermore, while the perception of support is frequently associated with health and well-being, actual supporting transactions are often unrelated to it, if not even negatively related (Scholz et al., 2012). However, the social support perceived by an individual will help to decrease the stress experienced by them which will, in turn, reduces suicidal ideation. Eventually, this leads to better health and well-being of an individual (Orbach, 1994). It was also found that perceived social support reduces suicidal ideation among adolescents (Bjarnason, 1994). Kleiman and Liu (2013) also identified social support as a protective factor in suicide. They also suggested that social support is a highly flexible factor that can be used to strengthen existing suicide-prevention initiatives all over the world. In addition, with a high level of social support, there was no association between occupational stress and suicide ideation (Carpenter et al., 2015). Suicidal ideation is influenced by perceived social support in both direct and indirect ways. As well, the level of distress mediated the effect of perceived social support on suicidal ideation (Lieberman et al., 2005). Similarly, Police officers reporting low social support indicated high level of suicidal ideation (Burke & Mikkelsen, 2007).

Despite the fact that there are several studies on suicidal ideation, there is a dearth of studies that examine suicidal ideation as a prominent determinant among Police officers, particularly in

Kerala. This study was a step in this direction. The aim of the study was to find whether there is a relationship between suicidal ideation and perceived social support among Police officers. In addition, it also attempted to find out the extent of suicidal ideation and perceived social support among Police personnel.

Method

Sample

The sample of the present study consisted of 95 Police personnel of Kerala including both males and females, of which the majority belongs to the age group of 31 to 50. The sample was drawn through convenience sampling method and the data was gathered using survey method. Both online and direct field survey was used to collect the data. Specially designed Google form was sent to the participants through email and other online platforms; the responses were received online. Whereas, in Direct Field Survey method, printed questionnaires were directly distributed to the Police personnel by the investigator for collecting data.

Tools

Suicidal Ideation Scale — (SIS-SDBV): This scale was developed by Sisodia and Bhatnagar (2011) with an aim to measure the suicidal ideation. The scale comprises of 25 statements and has an internal consistency of 0.81 and test-retest reliability of 0.78.

Multidimensional Scale of Perceived Social Support (MSPSS): Zimet et al., (1988) developed this scale to assess the level of perceived social support from three different sources: family (FA), friends (FR), and significant others (SO). This tool is a 12 statement self-report questionnaire and has a reliability of 0.91, 0.89, and 0.91 for the dimension family, friends, and significant others,

respectively. The scale has a reliability of 0.93 for the total score.

Procedure

The request letter for data collection was initially submitted to the State Police Chief, Police Head Quarters, Thiruvananthapuram and Deputy Inspector General of Police, Police Academy, Thrissur. Thereafter, the permission was granted by the authority for collecting the data from Police personnel with their informed consent. Accordingly, the data collection was completed using online and offline methods. 190 hard copies of the questionnaire were distributed among the available Police personnel and 79 were given back, of which 14 were rejected due to inadequate data. Likewise, 30 responses were accepted through online mode. This made a total of 95 responses, which was later analysed using various statistical methods.

Results and Discussion

Table 1

Spearman's Rank Order Correlation of Suicidal Ideation and Perceived Social Support among Police personnel

Variable	Perceived Social Support
Suicidal Ideation	-0.32**

**Correlation is significant at the 0.01 level

The correlation between suicidal ideation and perceived social support is shown in table 1. The above result indicates a significant negative correlation between suicidal ideation and perceived social support. This finding suggests that suicidal ideation of an individual tends to increase when the individual perceives the social support provided by his/her immediate surroundings as low. This finding may be considered as a confirmation to the existing theories (Diathesis stress model, stress coping theory & stress-buffering model of social

support) which states that failure to cope with potentially dangerous events will eventually result in stress, but the harmful effects of stress on the individual will be mitigated by social support. Similarly, the finding goes in line with the empirical ground that social support is a protective factor of suicidal ideation (Kleiman & Liu, 2013; Shaheen & Jahan, 2017). This might be because of the buffering effect of perceived social support on detrimental effects of stress on the health and well-being of an individual. In the case of Police personnel, not just the nature of their work, but also administrative variables such as high pressure for hierarchical conformity was also considered stronger predictors of stress. (Morash et al., 2006). The increased level of stress has been recognized as a major reason for an increased level of suicidal ideation. Social support might also reduce occupational stress (Cohen, 2004), which has a positive association with suicidal ideation (Carpenter et al., 2015). Support from colleagues and close friends might also reduce the level of suicidal ideation among Police personnel (Miller et al., 2014). As Kleiman and Liu (2013) suggested, measures can be taken to increase the perceived social support in order to reduce the influence of predictors of suicide like stress, anxiety and depression.

Table 2

The nature and extent of suicidal ideation among Police personnel

Variables	Mean	Std. Deviation	N
Suicidal Ideation	48.40	13.80	95

The result indicates that the extent of suicidal ideation among the Police personnel is average. An average level suicidal ideation is alarming because it is an indicator of the presence of suicidal thoughts. When triggering factors are present, these ideas could grow more sophisticated, and the person may engage in suicidal behaviour. According to the ecological model of suicide,



several personal, interpersonal and sociocultural factors are contributing to suicidal behaviour. The environment and all work-related stressors might be a reason for this level of suicidal ideation. Their training sessions, coping skills and strong support system may be assisting them in mitigating the effects of stress to some degree. But if these support systems and coping skills are more strengthened or improved, that would help them to move away from suicidal ideation at an expedited rate. This finding goes in line with the findings of Goldney et al., (2000); Mehlum (2005); Paykel (1975) and Yen, et al., (2005). In addition, negative emotions and negative thoughts among Police personnel might also be a reason leading to an average level of suicidal ideation (Holt & Brown, 1943). Self-blame is a strong predictor of suicidal ideation and it can also be concluded that self-blame among Police personnel may also be a reason for the average level of suicidal ideation among Police personnel (Nwankwo, 2017). Individuals with high suicide ideation are hostile (Vinoda, 1966), hence the Police population might also exhibit a moderate level of hostility and their dreams might be moderately filled with the content of violence (Raphling, 1970). Hence, this finding indicates the need to have special attention with respect to suicidal ideation among Police personnel.

Table 3

Nature and extent of perceived social support among Police personnel

Variables	Mean	Std. Deviation	N
Family	22.03	5.04	95
Friends	19.43	5.13	95
Significant Others	21.50	6.23	95
Total	62.53	11.81	95

The above result shows that the level of social support is moderate and the support from the family

was more when compared to the other dimensions (friends and significant others). The moderate level of perceived social support may help to mitigate the negative impact of life events and other psychosocial stressors on an individual's health and well-being. (Kong & Wertheimer, 1994). Due to the difficult working conditions of their profession, the level of social support sought by Police officers may be higher and a moderate level of perceived social support could help them to significantly reduce the stress they experience. Hence perceived social support of the Police personnel has to be enhanced to improve their physical and psychological well-being. Interaction between positive social networks might be helpful to increase the level of social support which will in turn help to enhance and maintain the health and well-being of the individual (Eaton, 1978; Seeman et.al, 1995). In comparison to friends and significant others, Police officers report stronger social support from the family. It could be because, family members of Police officers might be providing stronger emotional support, allowing them to better equip them to deal with their problems or concerns. This finding is in line with the findings of Schaefer et al., (1981). To a great extent, this might be a major factor that helps the Police personnel to buffer the negative impacts of the perceived stress. In addition, India is a country with a collectivistic culture where more importance is given to the family system and interdependence. Seeking help from another person might help individuals to ventilate their problems and worries which in turn assist them to feel comfortable while encountering stressful situations. This may also reduce the sense of loneliness and help to increase the sense of connectedness. Hence, spending more quality time with family members may help the Police personnel to reduce various kinds of problems associated with their work life. This finding is consistent with the study of Harris and



Molock (2000). Therefore, greater focus and attention might be paid to enhance the perceived social support of Police personnel in order to prevent suicidal ideation and to maintain health and well-being among them. It may also contribute to the enhancement of efficiency of Police personnel and thereby enabling them to provide better service to society.

Implications and Recommendations

Suicidal ideation at an average level necessitates special care because there is a risk of attempting suicide when encountered with triggering factors. In addition, suicidal ideation might affect several spheres of the life of an individual such as personal, family, organizational and societal spheres. Suicidal ideation may hinder the physical and psychological well-being and an individual with suicidal ideation may have strained interpersonal relationships due to inappropriate communication and low self-awareness. Moreover, it may lead to low self-esteem and self-confidence which may prevent or reduce their social interactions. All such issues might cause internal conflicts which may adversely affect their work-life, achievement motivation and self-worth. Similarly, self-handicapping behaviours may arise in such individuals. A suicidal individual may exhibit violence and homicidal behaviour which in turn leads to psychological discomfort in their colleagues, family members and others with whom they are interacting. The suicide of a family member, on the other hand, will disrupt the lives of other members of the family too. They may experience a great deal of remorse for failing to prevent the individual from committing suicide, which can even lead to depression. In addition, the death of a family's breadwinner will result in economic problems in the family. Moreover, negative thoughts of a Police officer who engages in suicidal behaviour might lead to a variety of workplace issues, concerns and interpersonal conflicts with his or her co-workers. In the same

way, more than a loss at the administrative level, it might have a bad effect on other Police officers who work in the same workplace and are exposed to the same stressful conditions. Suicidal death of Police personnel might cause emotional and psychological problems for their co-Police personnel and this may reduce the effectiveness of functioning of the whole department. Also, it may erode public confidence in Police officers and the system as a whole. As a result, society becomes anxious about policing system of the state and even the law and order of the country. Such events might also effect the reputation of the department and the possibility of losing the pride and privilege owned by Police personnel. Correspondingly, the suicide of a Police officer might cause a great loss for the government. Because the time, effort, money and other resources invested in a person to equip them to serve society as a Police officer would become futile in the aftermath of such a step. Also, if that vacancy is to be filled, the state has to recruit and post another Police officer after all the required training. All of this might be a significant loss for the state in terms of financial resources as well as human resources. Hence this is of great concern and attention for the department and state too.

The study also found that perceived social support of Police personnel would mitigate the detrimental impact of stress on their health and well-being. Therefore, improving perceived social support might help more in this regard. The present study implies that the Police population of Kerala requires more attention and concern in order to enhance their psychological and social wellbeing. A detailed and in-depth study will help to know the problems faced by the Police personnel in breadth and depth. The Police department may appoint a psychologist at the district level to deal with the mental health issues among the Police personnel. Providing time-bound training to senior-level officers will also help to create awareness about the importance of mental



health and well-being among themselves and their subordinates. Also, the officers may be trained to recognise various mental health issues among their subordinates. Forming family groups that can gather once in 3 months or twice a year, or if possible more frequently, may also help to form strong bonds among the Police personnel and their families. This may be a channel for them to ventilate pent up emotions and also act as an avenue to get social support. Similarly, a peer networking system can be developed with the help of trained psychologists. At least two or three Police officers in a Police station can be trained to be peer counsellors. This may be helpful to identify and recognize the warning signs of mental health issues among their peers. They may also act as a first-time responder at the time of a crisis among their fellow colleagues. Reforming their working conditions by effectively managing the working hours may also help to reduce suicidal ideation and other mental health issues among the Police personnel.

Limitations of the study

The sample size in relation to the population of the study is less in number. Samples were chosen by non-probability sampling method which may reduce the possibility of generalizing the results as well. In the same way, the use of questionnaires like the suicidal ideation scale developed to assess the general population may reduce the accuracy of the responses. Instead, a specifically prepared tool for the Police population, considering their work life, stress and lifestyle, might be more appropriate. The major socio-demographic variables like gender and designation were not used in the analysis due to insufficient data, which was also a limitation of the study.

Conclusion

The findings of the study corroborate the importance of perceived social support as a protective factor against suicidal ideation. Perceived social support can be used as an important measure to strengthen the existing suicidal prevention programmes, as evidenced by a significant negative correlation. According to the findings of this study, better intervention programmes should be established to provide better social support to the Police personnel to enhance their mental health and well-being.

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The Vital Coach: Nurturing Talent in Police and Paramilitary Sports



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Abstract

In the realm of law enforcement and paramilitary service, sports serve as a dynamic platform fostering not just physical prowess but also holistic growth among individuals. This extensive analysis navigates the profound impact of sports and coaches within these forces. It delves into the multifaceted significance of sports in youth development, the pivotal role of mentorship offered by coaches, the psychology of performance enhancement, nutritional essentials, the detrimental effects of performance-enhancing drugs, awareness surrounding doping regulations, the coach-athlete relationship, and the foundational encouragement of aspiring athletes at the primary level.

Highlighting the transformative power of sports, this exploration unveils how sports activities instil values, nurture resilience, foster teamwork, and shape ethical conduct-essential qualities for future officers. Coaches, as mentors, guide individuals beyond athletic skills, preparing them not just physically but also mentally and ethically for the challenges of service. Emphasizing the broader implications of sports, this analysis underscores its role in shaping individuals into responsible stewards of public safety and service.

Keywords: Law enforcement, Crucial Role of Sports and Coaching, Paramilitary, mentorship, public safety and service, Influence, domain

The Crucial Role of Sports and Coaching in Police and Paramilitary Domains

Sports play a pivotal role in shaping not only physical abilities but also the character, discipline, and resilience of individuals, particularly within the realms of law enforcement and paramilitary service. In the rigorous and demanding environments of police and paramilitary forces, the influence of sports extends far beyond physical fitness-it becomes a catalyst for holistic development among the youth serving these institutions.

These forces often require individuals to navigate high-stress situations, work cohesively in teams, and maintain peak physical and mental fitness. Engaging in sports activities within these institutions provides a unique platform for officers to hone their skills, build camaraderie, and develop the attributes crucial for effective service.

Moreover, the guidance and mentorship offered by coaches play an indispensable role in harnessing the potential of young talent. Beyond teaching athletic techniques, coaches serve as mentors,

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guiding individuals through challenges, instilling discipline, and fostering leadership qualities. This article seeks to explore the multi-faceted significance of sports in the context of police and paramilitary forces, with a particular focus on the invaluable contributions made by coaches in nurturing talent and shaping well-rounded individuals poised for service and leadership roles.

By examining the influence of sports, the mentorship provided by coaches, the psychological aspects of performance, nutritional considerations, and the ethical dimensions of sportsmanship, this article aims to underscore the vital role played by sports and coaches in the holistic development of individuals within the police and paramilitary domains.

Influence of Sports in Youth Development

Sports stand as a cornerstone in the development of young individuals within police and paramilitary forces, transcending mere physical exercise to become a catalyst for holistic growth. In these domains, sports activities are not just recreational but integral to the training and preparation of future officers.

Participation in sports cultivates essential attributes vital for effective service. The collaborative nature of team sports fosters teamwork, cooperation, and leadership skills among the youth. Whether engaged in team-based games or individual sporting activities, individuals learn the importance of collective effort, communication, and shared objectives, which are indispensable in the line of duty.

Moreover, the rigors of sports train individuals to cope with stress and adversity, nurturing mental resilience essential for confronting the challenges inherent in law enforcement and paramilitary service. The physical demands of sports also contribute significantly to their overall fitness,

ensuring they are prepared for the physical demands of their roles.

Beyond physical attributes, sports serve as a platform for character building. The rules and structure inherent in sports teach discipline, fair play, and ethical conduct. Individuals learn to respect opponents, accept victories graciously, and overcome defeats with dignity. These values are deeply ingrained, shaping the moral compass of future officers.

Additionally, sports facilitate cultural integration and community bonding within these forces. They provide a common ground where individuals from diverse backgrounds unite, fostering camaraderie, breaking down barriers, and reinforcing a sense of unity essential for effective community engagement.

The comprehensive influence of sports in youth development within police and paramilitary forces cannot be overstated. It serves as a multifaceted training ground where physical fitness, teamwork, resilience, ethical values, and cultural integration converge to mould individuals ready to take on the diverse challenges of service.

In essence, sports play a pivotal role in not only fostering physical fitness but also in shaping well-rounded, disciplined, and morally conscious individuals poised for effective and responsible roles within the police and paramilitary forces.

Importance of Coaches

Coaches within the domain of police and paramilitary sports are instrumental figures, wielding significant influence beyond teaching athletic skills. They serve as mentors, guiding individuals toward not only athletic excellence but also personal and professional development. Their impact extends deeply into shaping character, discipline, and leadership among those preparing for service.



These mentors act as more than just instructors; they are sources of guidance and wisdom, drawing from their own experiences to instil values, work ethics, and Professionalism in athletes. Beyond technical skills, coaches design specialized training programs tailored to the unique demands of law enforcement and paramilitary roles. These programs focus on enhancing physical fitness, mental agility, and endurance, ensuring individuals are prepared for the rigorous challenges they might face.

Crucially, coaches play a pivotal role in instilling discipline, resilience, and accountability among athletes. They cultivate unwavering commitment, reinforcing the importance of perseverance even in adverse circumstances. Recognizing the significance of mental resilience in high-stress environments, coaches employ psychological strategies to fortify athletes' mental strength, preparing them for the demanding situations inherent in their future roles.

Moreover, coaches nurture leadership qualities, emphasizing the importance of effective teamwork while fostering an environment conducive to personal growth. They provide personal support, acting as confidants and guiding individuals through setbacks both on and off the field.

Ethical mentorship is another cornerstone of coaching within these forces. Coaches uphold and impart values of fair play, integrity, and adherence to rules. They instil sportsmanship and ethical conduct, emphasizing the importance of upholding principles even within competitive environments.

Ultimately, the impact of coaches extends far beyond the athletic realm. Their mentorship shapes individuals ready to take on multifaceted roles within police and paramilitary forces, moulding not only athletic prowess but also the essential qualities of leadership, discipline, and ethical conduct. They prepare individuals to serve with excellence, integrity, and resilience in the challenging

landscapes of law enforcement and paramilitary service.

Role of Psychology in Improving Performance

Psychology serves as a cornerstone in optimizing performance within the domain of police and paramilitary sports. It goes beyond physical prowess, delving into the mental aspects crucial for success in high-stress and demanding environments.

One of the fundamental aspects psychology addresses is mental resilience. Athletes undergo training that cultivates mental fortitude, enabling them to remain composed and effective under pressure, a skill invaluable in the challenging scenarios officers might face.

Focus and concentration are essential in both sports and service roles. Psychological techniques are employed to enhance these attributes, ensuring individuals maintain unwavering attention amidst distractions, enabling optimal performance when it truly matters.

Confidence-building techniques are also integral. Believing in one's abilities is paramount not only in sports but also in the unpredictable and high-stakes situations officers might encounter. Psychology aids in fostering self-belief and a positive mind-set.

Effective stress management is crucial for officers facing intense situations. Psychological training equips them with tools to manage stress effectively, enabling clear-headed decision-making even in the midst of chaos.

Additionally, psychology facilitates goal setting and visualization, empowering individuals to set clear objectives and visualize successful outcomes. These techniques aid in channelling efforts toward achieving desired results.



Understanding team dynamics and interpersonal relationships is also a focus. Psychology fosters effective communication, conflict resolution, and teamwork, vital for a cohesive and efficient unit.

The application of psychology within police and paramilitary sports is instrumental. It hones mental attributes essential for peak performance, preparing individuals not just physically but also mentally for the multifaceted challenges inherent in their future service roles.

Nutrition and Sports

Nutrition stands as a fundamental pillar in the realm of police and paramilitary sports, playing a vital role in optimizing physical performance and maintaining peak fitness levels for individuals engaged in these demanding roles.

A balanced and strategic diet serves as the fuel that powers the body for the intense physical exertion demanded by these forces. Athletes require a well-rounded diet that provides the necessary energy and nutrients to sustain their performance during rigorous training sessions and operational duties.

Beyond fuelling performance, nutrition is crucial for post-exercise recovery. Rigorous training often strains the body, and proper nutrition aids in muscle recovery, reduces fatigue, and expedites the healing process, ensuring athletes are ready for subsequent sessions or operational tasks.

Maintaining optimal physical condition is a core focus of proper nutrition. It aids in weight management, muscle strength building, and endurance enhancement—essential attributes for officers and personnel engaged in physically demanding roles.

Hydration is paramount. Athletes need proper fluid intake to remain hydrated during training and operations, preventing fatigue and enhancing overall performance.

Tailored nutritional plans are indispensable. Dietitians and nutritionists design plans that align with the unique physical demands and schedules of these forces. These plans ensure individuals receive the necessary nutrients at the right times and proportions.

Specific operational duties might require specialized nutritional considerations. Roles demanding endurance, strength, or rapid recovery may necessitate customized diets tailored to meet those specific demands effectively.

Educating individuals about the significance of nutrition is vital. Promoting nutritional awareness empowers individuals to make informed dietary choices, fostering a culture of health and fitness within these forces.

Nutrition serves as the bedrock for optimal physical performance within police and paramilitary sports. It goes beyond mere sustenance, forming a strategic component in preparing individuals for the rigorous physical challenges they are likely to encounter in their roles.

Effect of Performance Enhancing Drugs

The use of performance-enhancing drugs (PEDs) in police and paramilitary sports presents a concerning issue that extends beyond immediate athletic gains, posing significant risks and consequences for athletes and officers involved.

One of the foremost concerns is the severe health risks associated with PEDs. These substances, often promising enhanced performance, can lead to hormonal imbalances, liver damage, cardiovascular issues, and psychological disturbances. The potential health risks outweigh any short-term benefits, jeopardizing the long-term well-being of individuals.

Ethically, the use of PEDs raises serious concerns. It creates an uneven playing field, compromising



the fairness and integrity of sports competitions within these forces. Athletes gaining an unfair advantage through artificial enhancements undermine the core principles of fair play and sportsmanship.

Legally, the use of PEDs often violates regulations and laws. Many performance-enhancing substances are illegal or prohibited in organized sports, including those within police and paramilitary forces. Violations can have legal consequences and tarnish an individual's reputation and career.

Moreover, the use of PEDs erodes trust within the sports community. It undermines the credibility of athletes and officers, damaging the trust placed in them by their colleagues, peers, and the public. Such breaches of trust can have far-reaching consequences beyond the individual athlete.

The impact of PEDs extends beyond athletic performance. In roles requiring physical prowess and decision-making, these substances may impair an individual's ability to perform effectively. Rather than enhancing capabilities, PEDs might disrupt cognitive functions and critical decision-making, compromising operational effectiveness.

Educating athletes and officers about the dangers and consequences of PEDs is crucial. Anti-doping programs and education initiatives serve as deterrents, aiming to dissuade individuals from resorting to these substances. Preserving the fairness and integrity of sports competitions hinges upon raising awareness and preventing the use of PEDs within these forces.

In conclusion, the use of performance-enhancing drugs in police and paramilitary sports presents substantial risks to health, fairness, integrity, and trust. Educating individuals about the detrimental effects of PEDs is pivotal in upholding the

principles of fair play, safeguarding athlete well-being, and maintaining the credibility of these sporting communities.

Awareness about Doping and Rules (NADA and WADA)

Maintaining integrity and fairness in sports within police and paramilitary forces hinges on a comprehensive understanding of doping regulations and adherence to the rules outlined by organizations like NADA and WADA. These entities are instrumental in establishing, educating, and enforcing anti-doping measures to ensure clean and equitable competition.

NADA and WADA are at the forefront of establishing stringent regulations governing the use of prohibited substances and methods in sports. They set standards and guidelines, ensuring athletes and support staff are aware of banned substances and prohibited practices.

Educational initiatives form a cornerstone of their efforts. NADA and WADA conduct extensive awareness programs aimed at athletes, coaches, and support personnel. These programs emphasize the risks and consequences associated with doping, highlighting the ethical implications and reinforcing the values of fair play and integrity in sports.

To uphold these regulations, both agencies employ rigorous testing procedures. Athletes are subjected to random and targeted drug tests, ensuring compliance with anti-doping policies. The testing is conducted both during competitions and outside, ensuring a level playing field for all athletes.

Violations of anti-doping regulations lead to severe repercussions. Athletes found guilty of doping offenses face sanctions, including suspensions, disqualifications, loss of medals, and damage to their reputation. These consequences serve as deterrents to prevent doping practices.



WADA, as an international body, establishes uniform anti-doping standards across various sports and countries. This harmonization ensures consistency in anti-doping measures globally, contributing to the fairness and credibility of sports competitions.

Collaboration with sports organizations, governing bodies, and law enforcement agencies is crucial. NADA and WADA work closely with these entities to enforce anti-doping regulations effectively, offering support and guidance to ensure compliance.

Ultimately, the efforts of NADA and WADA are central to upholding fair play and integrity within police and paramilitary sports. Their regulations, educational programs, testing procedures, and collaborative initiatives serve as safeguards, ensuring clean and equitable competition while reinforcing the values of sportsmanship and ethical conduct.

Coach-Athlete Relationship

The relationship between coaches and athletes within police and paramilitary sports is pivotal, extending far beyond the boundaries of training sessions. It embodies a profound connection founded on mentorship, trust, guidance, and mutual respect—a relationship essential for the holistic development and success of athletes preparing for service roles.

Coaches in these domains serve as more than instructors; they are mentors. Their role extends beyond imparting technical skills to nurturing life skills, resilience, and leadership qualities. They guide athletes not just in their sport but also in their personal and professional lives, offering wisdom and support.

Trust and effective communication form the bedrock of this relationship. Athletes rely on their coaches for guidance, feedback, and unwavering support. Open communication channels create an environment where athletes feel understood and valued.

Recognizing the uniqueness of each athlete, coaches tailor their approach. They design personalized training programs, strategies, and support mechanisms based on individual strengths, weaknesses, and aspirations, aiming to maximize each athlete's potential.

Coaches are pivotal in motivating athletes and instilling confidence. They provide encouragement and support, helping athletes navigate challenges and setbacks with resilience and determination.

Moreover, coaches serve as role models, embodying dedication, discipline, and professionalism. Athletes often emulate the behaviour and values demonstrated by their coaches, shaping their own character and work ethic.

In enhancing performance, coaches identify areas for improvement and implement strategies accordingly. They offer constructive feedback, devise targeted training regimes, and provide technical guidance to elevate an athlete's skills.

Understanding the importance of mental resilience, coaches provide psychological support. They assist athletes in developing mental fortitude, managing stress, and maintaining focus during high-pressure situations.

The coach-athlete relationship is a long-term commitment. Coaches invest in the overall development of athletes, nurturing talent not just for immediate success but also for sustained growth and progression.

Encouragement of Players at Primary Level

The early stages of engaging young athletes within police and paramilitary sports are foundational in shaping their sporting journey and preparing them for future roles. Encouragement and support at this primary level are instrumental in nurturing talent, fostering interest, and laying



the groundwork for future success within these forces.

At this formative stage, introducing sports plays a crucial role. It exposes youngsters to various activities, allowing them to explore, learn fundamental skills, and discover their passions.

Sports at a young age contribute significantly to holistic development. They instil essential qualities like discipline, teamwork, resilience, and leadership-attributes pivotal for future roles within law enforcement and paramilitary service.

Encouragement in these early years builds interest and passion for sports. Positive experiences and support create an environment where a love for the game is nurtured, motivating individuals to continue their sporting journey.

Additionally, early exposure facilitates skill development. Coaching and guidance during these years help in honing basic skills, laying a strong foundation for future training and specialization.

Engagement in sports from a young age also promotes physical fitness and an active lifestyle. It instils healthy habits, ensuring readiness for the physical demands inherent in service roles.

Recognizing and nurturing talent at this stage is vital. Encouraging potential athletes fosters their confidence, self-belief, and aspiration to excel, setting the stage for future success.

Creating a positive, enjoyable experience in sports activities at the primary level is crucial. Prioritizing fun encourages sustained participation and cultivates a lifelong appreciation for sports.

Moreover, encouragement should be inclusive, embracing diverse talents and interests. Providing support and opportunities for all aspiring athletes, irrespective of background or ability, ensures an inclusive and nurturing environment.

Coaches and mentors at this level play a pivotal role. Their encouragement, guidance, and positive reinforcement shape the attitudes and aspirations of young athletes, laying the groundwork for their sporting journey.

Empowering Future Servicemen and Athletes

In examining the multifaceted realm of police and paramilitary sports, it becomes evident that these domains extend far beyond athletic prowess. They embody a holistic approach that intertwines physical readiness, mental fortitude, and ethical values essential for service roles.

The influence of sports in youth development forms the bedrock upon which future athletes and servicemen stand. At the primary level, encouragement, mentorship, and exposure to sports lay the foundation for not only athletic skills but also for the development of resilience, leadership, and teamwork-attributes paramount for success within these forces.

Crucially, the coach-athlete relationship emerges as a linchpin, shaping not just athletic capabilities but also character and fortitude. Coaches, as mentors and guides, instil discipline, motivation, and confidence, moulding individuals for the rigorous demands of service.

Psychology emerges as a silent but formidable force in enhancing performance. Mental resilience, focus, and effective stress management become tools vital for both the sports arena and real-life scenarios officers may face.

Nutrition transcends mere sustenance; it becomes a strategic element in preparing individuals for physical challenges. It fosters endurance, strength, and recovery, ensuring readiness for the demanding nature of service.

However, amid these preparations lie challenges-ones that the insidious use of performance-enhancing drugs seeks to exacerbate. Upholding the rules set forth by organizations like NADA and WADA becomes crucial in safeguarding

fairness, integrity, and the health of athletes and officers alike.

At the core of this comprehensive approach lies the encouragement and support provided at the primary level. It is here that talents are nurtured, passions ignited, and values instilled, shaping individuals not just as athletes but as future stewards of public safety and service.

In essence, police and paramilitary sports transcend the arena of competition; they become crucibles where resilience, discipline, and ethical values are forged. They serve as laboratories cultivating not just athletic prowess but also the character and fortitude necessary for the noble duty of safeguarding communities and nations.

As these aspiring athletes and future officers embark on their journeys, armed not just with physical prowess but also with ethical grounding and mental resilience, they stand as testament to the transformative power of sports within the sphere of service.

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Defying Death : A Deep Dive in IED Ambushes

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Abstract

An improvised explosive device (IED) is basically a "homemade" bomb and/or destructive device, used by criminals, vandals, terrorists, suicide bombers, and insurgents to intimidate, inflict casualties, destroy property, and destabilize the existing setup or regime in the country. IEDs come in many forms, ranging from a small pipe bomb to a sophisticated device capable of causing massive destruction of life and property. IEDs can be delivered in a package or carried or delivered in a vehicle or carried, placed, or thrown by a person or concealed on the roadside. The use of IEDs to cause destruction of life and property is becoming more widespread and common. The present article attempts to provide information on safeguarding Police personnel from IED attacks.

Keywords: IED, death, Police, personnel, ambush.

Introduction

Yesterday's unfortunate death of two out of five Army men in IED explosion in Rajouri and the IED/ landmine blast in Chattisgarh in which 10 DRG personnel were martyred a fortnight ago, remind me of 26th Sept 1992 AN, when I faced, arguably, the toughest situation that a police officer will possibly handle.

A BSF bus carrying around 25 personnel was caught in a IED ambush over a culvert, while returning from a routine cordon & search operation in Station Ghanpur P.S. of Warangal district. When I reached there along with my team of Greyhounds commandos, the scene was ghastly and chaotic. The "Smog of war" was getting played out in its most devilish way.

Badly mutilated bodies of eight BSF personnel, who died on the spot, lay strewn around the culvert, with another 10/12 BSF personnel, grievously injured, requiring urgent evacuation and medical attention. The bus was thrown around 20 mts away, due to the sheer impact of explosion caused by 40 kgs of gelatine, neatly stacked in the gaps between the concrete water pipes below the culvert. Just before my arrival, enraged on seeing the gruesome deaths of their colleagues, and apprehending firing from the naxals, the BSF personnel in the vehicles behind, had instinctively opened fire, killing two unsuspecting villagers, injured a few, who were doing kharif plantations in the adjoining fields and were braying for more blood. The villagers angered and agitated by the BSF firing, had rallied in a big unruly mob were pelting stones on the BSF party. The situation was fast turning explosive with the

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trigger happy BSF men thirsting to avenge deaths of their colleagues and the agitated farmers also venting their anger on the BSF men. It took all my tenacity, persuasive skills and patience to placate both the parties, and to send the injured to MGM hospital Warangal, where sadly, another six BSF personnel died, taking the total tally to 14. In November 1993, in eerily similar circumstances, my batchmate Pardesi Naidu IPS, the then S.P. Mahbubnagar was martyred along with another eight policemen in a landmine ambush of their vehicle by PWG Naxals.

It is estimated that more than 60% of the deaths of security personnel in LWE theatre is because of landmine/ IEDs ambushes. The recent Chattisgarh ambush is a chilling reminder that security personnel continue to make the same tactical mistakes which costs them heavily.

In all fairness, it needs to be accepted that till day, no 'Silver bullet' solution to the problem of IEDs/ landmines has been found globally. For example, in Afghanistan in 2000s, the IEDs were the biggest cause of fatalities, mounting up to 65% for the International Security Assistance Force (ISAF) of NATO and the Afghanistan National Security Forces. In 2010 alone, 268 American troops were killed and 3360 injured by IED strikes. Coalition wise, there were 7800 casualties and 368 fatalities from IEDs. Even, the IPKF suffered heavy casualties due to effective use of IEDs/ landmines by LTTE during Operation Pawan.

What are these tactical mistakes and how they can be minimised?

The quintessential dilemma that security forces face, more so in a liberal democracy, is that they are dealing with an enemy who is faceless, unidentifiable and hidden amongst the people. Wedded to upholding the law of the land and protecting its people, security personnel cannot open fire on mere apprehension; except for in self-defence. The terrorist, whether of LeT in Kashmir or MCC in central India, has the 'First

Mover advantage', be it triggering a landmine/ IED on a mobile Army vehicle or opening burst fire with a AK- 47 on a static CRPF sentry post.

In all such scenarios, particularly in landmine/ IEDs ambushes, the reaction or the response time available for what is called "Immediate Action (IA) or Counter Ambush drill" is a few seconds; that too, if a few of the security personnel are lucky enough to survive the initial IED ambush. Hence, all SOPs, systems and procedures, technological measures etc. are directed towards identification and detection of IEDs/ landmines and to avoid being caught in them.

Instead of doing a post-mortem analysis and indulging in criticism of past incidents, I will highlight and reiterate measures, based on my personal experiences and globally recognized practices, with special focus on LWE:

1) Avoid travel by vehicle: The safest mode of travel is on foot in LWE theatre. Studies show that over sixty percent of the casualties/ fatalities in LWE theatre are because of vehicles ambushed in landmines/ IEDs, as also seen in the recent Chattisgarh incident. Routine operations like area domination, cordon and search, LRP, ambush cum patrolling etc. should only be undertaken on foot. Vehicle travel should be undertaken rarely and that too, only for urgent operational reasons, after exercising due diligence.

2) Randomise the route, time and speed of travel: If vehicle travel is absolutely essential, the onward and return journeys should Never, repeat Never be by the same route, nor undertaken during day time. A little known fact is that the Maoists, to avoid the risk of civilian casualties, neither trigger IEDs during night time, nor use anti-personnel/ pressure induced mines. Exact timing of triggering IEDs is also an issue during night time. Hence, night travel by vehicles is relatively safe for security forces. Unfortunately, in both the above mentioned instances, the security forces returned during daytime and that too by the same route, resulting in heavy fatalities.



3) **Avoid Easy identification:** Stealth, camouflage and concealment are integral to anti terrorist operations. Olive green vehicles of the Army, light green vehicles of CRPF are easily identified from a distance, giving adequate time and opportunity to the terrorists to organize the IED ambush. Hence, if vehicle travel is absolutely essential, security forces are expected to take civilian/ state RTC buses. To avoid easy identification, they must travel with the civilians in mufti with weapons carefully concealed.

4) **Armoured Vehicles and Personnel Protective Equipments:** In certain war theatres, vehicular deployment is inevitable. Security forces working in such areas should be equipped with appropriate protective gear, such as blast-resistant clothing, helmets, and eye protection. Their vehicles should also be equipped with V shaped and armour plated hull and blast-resistant technology and proper sandbagging to minimize damage in the event of an explosion. Machine guns / other weapons should be mounted on top of the vehicles with outward facing rotatory seats, from where the men can have 360 degrees observation outside.

5) **Vehicle dispersion:** Security forces should always travel in a convoy of minimum 2/3 vehicles, maintaining at least 40 to 50 m inter vehicle distance, so that even if one vehicle is caught in a landmine, the personnel in other vehicles are able to take positions and neutralise the threat.

6) **Detection and Clearance:** Rigorous and regular implementation of various detection methods, such as metal detectors, ground-penetrating radar, and trained sniffer dogs, to locate and clear landmines and IEDs, is essential. Road opening parties (ROPs) play an important role in detection of ambushes.. Aerial surveillance carried out through UAVs / drones, Road opening parties, equipped with UGVs (Unmanned Ground Vehicles), on the ground, not only detect presence of terrorists to carry out operations but also provide tell-tale signs of a likely ambush like, piles of rock and mud bags, dugout portions on the sides of the

roads, and absence of people or movement of other vehicles. Many of these UAVs/ UGVs are now hand held/ remote controlled and are used for short distance surveillance up to 50 to 60 m.

7) **Mapping, Risk assessment and Contingency Planning:** Based on the above inputs, areas known or suspected to contain landmines or IEDs can be mapped and contingency plans prepared for them. This includes establishing safe routes, setting up checkpoints, and creating evacuation plans as part of both preventive and mitigation measures.

8) **Intelligence Collection:** it is important that the Secret Service Expenditure is incurred on collection of actionable intelligence. Due to enormous risks of reprisals by terrorists, the locals wouldn't divulge info for money alone. Winning of hearts & minds (WHAM) is neither easy nor quick. Relationships have to be cultivated and goodwill generated amongst the local populace, on a long term basis & beyond and above transactional levels. This requires patience, commitment, empathy and integrity on the part of security forces, which is sometimes missing.

9) **Investigation of post Explosion cases:** There is simply no substitute for good, old routine investigation of crimes, including that of IED ambushes. An IED ambush is not an insular, stand alone event. There is a whole ecosystem behind it, comprised of financiers, suppliers, transporters, builders, emplacements and triggermen. It is pertinent to mention here that in just one year alone (2008-9) in Afghanistan, the US forensic investigation teams picked up a mindboggling 5000 finger prints from the remnants of IEDs/ explosives, recovered from the scenes of bomb blasts. This enabled identification and detection of hundreds of suspect & accomplices, involved in IED ambushes. Diligent and scientific investigation, establishment of linkages through meticulous collection & marshalling of evidence, framing of chargesheets, followed by speedy trials and conviction not only enhance majesty of law and credibility of the Govt, but serve as a strong deterrent to terrorism.



It is heartening to see NIA promptly taking up cases of investigation of IED ambushes, be it Pulwama or Bhimger Wali and doing an excellent job. However, capacity building has to be done at state levels, as essentially, it is the states that are responsible for maintenance of Law & Order.

10) Institutional Measures: Several measures need to be undertaken at the Governmental levels, both Central and states. These include collaboration with international organizations, NGOs, and other countries to share information, resources, and best practices for landmine and IED prevention, detection, and clearance; implementation and enforcement of national and international laws, policies, and regulations aimed at preventing the use, production, and trade of landmines and IEDs.

Legislative measures are required for mandatory addition of odoriferous chemicals and/or biosensors to explosives used in industry/mining etc for their easy detection during transport and source tracking. Likewise, legislative mandating for use of only time delay/ time scrambled detonators and stricter controls on manufacture, supply and sale of explosives & detonators is important. Time delay/scrambled detonators will make it harder for the Maoists to synchronise triggering of explosive devices with the movement of targeted police vehicles.

11) Establishment of a dedicated C-IED Agency under MHA: Across the world, in the asymmetrical war that is usually fought between the mighty state(Goliath) and the David like terrorist organization, IEDs is the latter's stone and sling. How are major powers handling it?

US established a Joint Improvised Explosive Device Threat Organization, JIEDDO, (renamed JIDO in 2016) in 2006 'to prevent, identify and defeat IEDs'. It is believed to have spent over USD 20Bn till date and is doing a great job in all aspects of its C-IED mission. Likewise, NATO also has its own C-IED CoE, based at Madrid, ably supported by NC3A (NATO Consultation, Command and Control Agency). A small unit exists in India also under NSG.

Conclusion

Given that IEDs have been causing major setbacks to CI/CT efforts in India, it is high time that an overarching agency is created under MHA on the lines of agencies mentioned above, to coordinate the efforts of both the GoI and states, and to provide legislative, technological and procedural support to LE agencies.

The Counter IED efforts cannot be just left to the LE agencies. The collective will and might of the GoI and state governments, with matching support from the community are required, if this nation wants to win the war against terrorism.

Plea Bargaining in India

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Abstract

"Plea Bargaining" has been known to the western law jurisprudence for quite some time. Indian judiciary appears to be grappling with the concept, recording paradoxical approaches, oscillating between both extremes of discounting and abjuring it and its applicability in criminal law jurisprudence on one hand, and justifying and welcoming it by according its rightful place on the other hand. This article attempts to trace the historic evolution of the concept of "plea bargaining" and examine the importance and necessity of the same in India. For ease of contemplation the article is divided in five parts. Part I explores the conceptual analysis and the genesis of "plea bargaining". This part introduces the concept, traces its significance and its province or scope. A brief contextual analysis of its adoption and working in foreign jurisdictions has been attempted therein. Part II discusses and explores the felt need of embracing the concept in India and its legislative history. This part also delves into the pre-legislative research and the journey of codification and adoption of "plea bargaining", and securing a position into nothing lesser than the primary legislation governing the criminal procedural law in India. Part III is devoted to critically examine and analyse the case law jurisprudence on "plea bargaining" in India. Here an exposition of the polar discord and disjunctive judicial viewpoints has been attempted. It also explains the existing unsettled conceptual fluidity, (un)certainty and diametrically opposing interpretations exposing the infantile and teething problems, awaiting crystallization of the law. Part IV attempts to underscore the structural and operational differences in the idea "plea bargaining" in two democratic nations India and US by juxtaposing the Indian law as against the US. It accentuates the dissimilarities at social, economic and political dispensations. Part V concludes with suggestions.

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Part I

The Genesis and Conceptual Analysis

Plea bargaining in a criminal case is an agreement, often claimed to be premised on and evolved from the Latin maxims *nolo contendere*¹ or *non vult contendere*, in which prosecutor and accused *inter se* mutually work out to arrange and settle a criminal case filed against the accused. It is an agreement², wherein the accused wilfully accords to plead guilty, or surrender contesting. It is in essence a *quid pro quo* in exchange of quantitatively and/or qualitatively ascertaining a concession from the prosecuting agency. The said concession could be in the form of a reduced charge or a lessened sentence⁴.

The Standing Committee of the Rajya Sabha clearly considered and reported the concept as:

"Plea Bargaining" or "mutually satisfactory disposition" in criminal cases in its general sense refers to pre-trial negotiations between the defendant (accused) through his/her Counsel and the prosecution (complainant), during which the accused agrees to plead guilty in exchange for certain concessions by the prosecutor. Thus, plea-bargaining can be described as an agreement by an accused to plead guilty in return for the promise of some benefit.⁵

Conventionally often "plea bargaining" is argued to pervade into the domain of lawlessness and "evolved in the unregulated interstices of our criminal justice system."⁶ It is scholarly assumed to operate "beyond the shadow of law"⁷ and indicative of State's power vested in the prosecution (sometimes claimed unbridles in its practice in US). However, the wisdom may not be fully substantiated in Indian context owing to its definitive procedural codification implanting it systemically into the Criminal Procedure Code, 1973 (*hereinafter* CrPC), as a specific Chapter XXIA *vide* Amendment in 2006.

It is a pre-trial procedural negotiation between the State and the person accused. Wherein the accused concedes to agree and plead guilty in the barter with the State to secure penal concessions.

It ensures an *official concession* for the act of self-conviction.⁸ The concession may relate to lesser charge(s), lighter sentence(s) or a myriad other circumstances. The agreed upon concession may be explicit or implicit⁹. Moreover, the scope of "plea bargaining" is limited to pleading guilty and excludes bargaining for concessions on offering victim compensation, testifying against co-accused, resigning or relinquishing public offices or responsible positions on allegations of misconduct. The aforesaid are principally in addition to the limitations drawn by statutory provisions *viz.* offences of serious nature etc.

¹ See, Merriam-Webster Online Dictionary which explains history and etymology of the phrase as: "I do not wish to contend"; available at: <https://www.merriam-webster.com/dictionary/nolo%20contendere>. Last accessed on 18-05-2021.

However, the definition clearly explains subjecting a defendant to conviction "without admitting guilt". This simply may raise a fundamental contradiction to the position that in "plea bargaining" the accused or the defendant "concedes to a guilt". The emphasis however may be drawn rather on the notion and idea of the "voluntary relinquishment to contest".

² The legality of the agreement (especially on grounds of undue duress and coercion) has not been discussed and falls outside the scope of this article (fully aware of the fact that, the same remains a major point of academic criticism).

³ Also referred as "charge bargaining" dealt in more details below.

⁴ Also referred as "sentence bargaining" dealt in more details below.

⁵ See, 111th Report of the Rajya Sabha (Department-Related Parliamentary Standing Committee on Home Affairs), at point 4.4.0, February, 2005.

⁶ Kenneth Kipnis, *Criminal Justice and the Negotiated Plea*, 86 Ethics 93, 95 (1976); see also William Ortman, *Probable Cause Revisited*, 68 Stan. L. Rev. 511, 516 (2016).

⁷ See, David Alan Sklansky, *The Nature and Function of Prosecutorial Power*, 106 J. Crim. L. & Criminology 473, 480-81 (2016); see also, Andrew Manuel Crespo, *The Hidden Law of Plea Bargaining*, 118(5) Colum. L. Rev. 1303, 1305 (2018).

⁸ See, Albert W. Alschuler, *Plea Bargaining and Its History*, 13(2) Law & Society 211, 213 (1979).

⁹ See, *id.*



In other words, "plea bargaining" is a genus involving three species of bargaining namely: "charge bargaining", "sentence bargaining" and, "fact bargaining". However, for academic pursuits other species *viz.* "evidence bargaining", "compensatory bargaining and such other nomenclatures also exist. A brief account of these forms or species, and their scope and nature, can be understood as:

i. *Charge Bargaining*

This is often considered to be the most potent level of "plea bargaining". The reason being the fact that it controls the defendants' sentencing exposure by manipulating the potential of levelling of charges against him. "Charge bargaining" draws its importance from the probabilities that, i) it exposes the possibility and the grounds of conviction, and ii) the term (both minimum and maximum) of potential sentence on conviction. Hence, the bargaining on charges happens to be the most powerful weapon in the hands of the prosecutors (attracting the spot-light of academic criticism). "Charge bargain" can be therefore understood to be an agreement between State and accused to consider diminishing a higher charge to a relatively lower one, as *quid pro quo* to the promise by the accused to voluntarily plead guilty. The exercise considered to be a win-win, as it guarantees the prosecuting agency, a conviction foregoing the expense of a full trial.¹⁰

ii. *Sentence Bargaining*

In this type of bargaining, a lighter or alternate sentence is assured. Since sentencing is a judicial act, the concession

largely depends on the court to allow or disallow a plea. On occasions where a high profile or a popular case is triable, attracting public attention through media reporting, charges may not be easily dropped or bargained. In such extant cases "sentence bargaining" without dropping the charges serves as an effective alternative. The practice is popular in US.

iii. *Fact Bargaining*

"Fact bargaining" is not a prominent tool of negotiation. Here the negotiation involves an admission to certain facts, ensuring that the need for the prosecutor to prove them is eliminated. As a *quid pro quo* the accused is often offered the leverage by the prosecution, by refraining from introducing certain other facts before the trial courts.¹¹

With this brief layout of the concept, a more critical anatomic view is considered in the subsequent parts.

Part II

"Plea Bargaining" in India: The Motivation and Conflicting View-points

This part has been divided into two sub-parts. The first sub-part "A" does an analysis of the necessity felt by the Government of India to adopt the concept of "plea bargaining" in India. A spectacle of overt and strong judicial reluctance and apathy towards embracing the otherwise popular western concept (sometimes popularly called "trial waver") can be traced. The second sub-part "B" examines a comparative jurisprudence of the subject matter with US practices. An attempt to analyse the positions using SWOT¹² tool has been made to

¹⁰See, Andrew Manuel Crespo, *The Hidden Law of Plea Bargaining*, 118(5) Colum. L. Rev. 1311 (2018).

¹¹See, Dr. Justice Arijit Pasayat, *Plea Bargaining*, a speech delivered at Ahmedabad, Gujarat, on 14-07-2007.

¹²

examine the validity of the Indian position with the law.

A. An account of the evolution can be briefly discussed hereunder:

Evolution of the concept of "plea bargaining" in India had to see its rough and turgid days. The case law jurisprudence (atleast since 1970s through 2000s) is evidence to a severe reluctance between the apex court of India¹³ and the Law Commission

of India who advocated its introduction, *vide* its 142nd, 154th and 177th Reports. The clear conflicting and adversarial views (between the judiciary and legislature) may be accounted for in the unequivocal and strong opposition¹⁴ by the apex court as against the well-founded propositions¹⁵ of the Law Commission in its successive Reports¹⁶ "public opinion"¹⁷ on the introduction of such a concept, exhibiting yet again a great spectacle of the organic democracy at work.

¹³See, *State of U.P. v. Chandrika*, (1999) 8 SCC 638, 640. Wherein the court opined:

[T]he settled law ... is ... that the concept of "plea bargaining" is not recognised and is against public policy under our criminal justice system. Section 320 Cr.PC provides for compounding of certain offences with the permission of the court and certain others even without permission of the court. Except the above, the concept of negotiated settlement in criminal cases is not permissible. This method of short-circuiting the hearing and deciding the criminal appeals or cases involving serious offences requires no encouragement. Neither the State nor the Public Prosecutor nor even the Judge can bargain that evidence would not be led or appreciated in consideration of getting flea-bite sentence by pleading guilty.

¹⁴See, *Murlidhar Meghraj Loya v. State of Maharashtra*, [(1976) 3 SCC 684, para 13, wherein the court held:

To begin with, we are free to confess to a hunch that the appellants had hastened with their pleas of guilty hopefully, induced by an informal, tripartite understanding of light sentence in lieu of *nolo contendere* stance. Many economic offenders resort to practices the Americans call 'plea bargaining', 'plea negotiation', 'trading out' and 'compromise in criminal cases' and the trial magistrate drowned by a docket burden nods assent to the *sub rosa ante-room* settlement. The businessman culprit, confronted by a sure prospect of the agony and ignominy of tenancy of a prison cell, 'trades out' of the situation, the bargain being a plea of guilt, coupled with a promise of 'no jail'. These advance arrangements please everyone except the distant victim, the silent society. The prosecutor is relieved of the long process of proof, legal technicalities and long arguments, punctuated by revisional excursions to higher courts, the court sighs relief that its ordeal, surrounded by a crowd of papers and persons, is avoided by one case less and the accused is happy that even if legalistic battles might have held out some astrological hope of abstract acquittal in the expensive hierarchy of the justice system he is free early in the day to pursue his old profession. It is idle to speculate on the virtue of negotiated settlements of criminal cases, as obtains in the United States but in our jurisdiction, especially in the area of dangerous economic crimes and food offences, this practice intrudes on society's interests by opposing society's decision expressed through predetermined legislative fixation of minimum sentences and by subtly subverting the mandate of the law. The jurists across the Atlantic partly condemn the bad odour of purchased pleas of guilt and partly justify it philosophically as a sentence concession to a defendant who has, by his plea 'aided in ensuring the prompt and certain application of correctional measures to him':

'In civil cases we find compromises actually encouraged as a more satisfactory method of settling disputes between individuals than an actual trial. However, if the dispute ... finds itself in the field of criminal law, "Law Enforcement" repudiates the idea of compromise as immoral, or at best a necessary evil. The "State" can never compromise. It must "enforce the law". Therefore open methods of compromise are impossible.' [Arnold: Law Enforcement - An Attempt at Social Dissection, 42 Yale LJ 1, 19 (1932)] (emphasis added)

¹⁵See, The 11th Report of the Rajya Sabha (Department-Related Parliamentary Standing Committee on Home Affairs), at point 4.4.1, February, 2005.

The propositions were premised on the concept being in vogue in several western countries with special reference to US which weeds out and settles *via* bargaining negotiations, 95% of the criminal cases at pre-trial level. So much so in American Criminal Justice, plea-bargaining is the norm rather than an exception. This helps in getting rid of weak prosecution cases and lesser number of trials, thus making available more time to the courts for other cases.

¹⁶The 142nd, 154th, and 177th reports of the Law Commission of India.

¹⁷See, 142nd Report of the Law Commission (under Chairmanship of M.P.Thakker J.) which adduced five reasons voiced by public in favour of introduction of such concept in India. The same was considered by Rajya Sabha in its Standing Committee Report of February, 2005 under point 4.4.2 as under:



The Criminal Law (Amendment) Act of 2005¹⁸ introduced a new Chapter XXI A, on "plea bargaining" to CrPC which came into effect from 5th July 2006¹⁹. The twin legislative objectives were, to effectively reduce the delay in disposal of criminal cases²⁰ and to reduce the burden of the overwhelmingly overcrowded Indian prisons.

The Parties must arrive at a consensual and satisfactory disposition²¹ in compliance to the guidelines provided under the Code.²² The amendment explicitly underscores the duty of the court to ensure processual voluntariness, and that too subsequent to the application of the accused.²³ The Parties shall mutually compute to fix the victim compensation.²⁴ On arriving at a disposition, the court will finally pronounce the sentence to dispose-off the case on hearing the Parties.²⁵ The court may exercise its discretion to release a defendant on probation considering Section 360 of CrPC, or such other provisions attracted under

the Probation of Offenders Act, 1958, or any such other law.²⁶ Finally, the sentencing takes place wherein it may award a sentence reduced to half of what has been otherwise mandated as a minimum sentence for such offences.²⁷ Alternatively, if the court finds that no such rider of mandatory minimum sentencing is provisioned, it generally might proceed to award a fourth of the maximum statutorily permissible sentence for a given offence.²⁸ Once the court delivers a judgment, it renders the judgment as final and not appealable, *dehors* under writ petitions to the High Courts having jurisdiction, or a special leave petition under Article 136 of the Constitution of India, in the Apex court of India.²⁹ The Indian procedural law had carefully capped "plea bargaining" as exclusionary to limit its applicability to "serious offences"³⁰ viz. offences punishable with death or life sentences³¹, offences having a potential to impact the "socio-economic conditions"^{32,33} of citizen, and crime the

1. Most people arrested, are guilty anyway; why bother with a trial; 2. Why waste public money; 3. "Plea bargaining" is a compromise; both sides give a little and gain a little; 4. Trials consume time and cost; and 5. It is best (for both sides) to avail it since on the one hand there is always a chance that even if the accused is guilty and the evidence is adequate there is a chance of a slip up. On the other, the accused saves time and money and earns a concession in the form of a less serious offence or sentence.

¹⁸Act No. 02 of 2006 [11th January, 2006].

¹⁹The Chapter contains ten provisions viz. Section(s) 265A through 265L.

²⁰See, 111th Report of the Rajya Sabha (Department-Related Parliamentary Standing Committee on Home Affairs), at point 4.4.2, February, 2005:

The Law Commission (under the Chairmanship of Justice M.P. Thakkar) in its 142 Report, Considered the concept of plea-bargaining to overcome the problem of mounting arrears of criminal cases.

²¹See, Section 265B (4) (a).

²²See, Section 265C.

²³See, Section 265B (2) & (4).

²⁴See, Section 265B (4) (a).

²⁵See, Section 265D & E.

²⁶See, Section 265E (b).

²⁷See, Section 265E(c).

²⁸See, Section 265E (d).

²⁹See, Section 265G.

³⁰See, *State of U.P. v. Chandrika*, (1999) 8 SCC 638; also *See*, *Harbhajan Singh v. State of U.P.*, (2002) 9 SCC 407, 408.

³¹See, Section 265A.

³²See, Section 265A.

³³See, *State of Punjab v. Prem Sagar*, (2008) 7 SCC 550, 553. The apex court held that:

There are certain offences which touch our social fabric. We must remind ourselves that even while introducing the doctrine of plea bargaining in the Code of Criminal Procedure, certain types of offences had been kept out of the purview thereof. While imposing sentences, the said principles should be borne in mind.



vulnerable class i.e. against women and children.³⁴ Therefore offences punishable under statutes that have such impact preclude "plea bargaining". A brief account of the antecedent to the arrival of the formal codification of "plea bargaining"³⁵ reveals some interesting approaches taken to curb the (ab)use and misuse of the concept on one hand, and resilience and cynicism to proactively adopt the concept on the other hand. A couple of case law jurisprudence may be cited to corroborate the stances. In *U.P. v. Nasruddin*³⁶, it was held that:

Prima facie ...the invitation to... appellants who stand convicted of serious offences to have the plea bargain with the High Court with the bait that the sentence would be slashed down to even a very short period already undergone, will open a gate leading

to a serious miscarriage of justice. We feel that it is time to arrest ... actions of such miscarriage of justice and therefore ... resort to the step of suspending the operation of ...[such judgments] from being used as a binding precedent.

In *Kirpal Singh v. State of Haryana*³⁷, the apex court in this case held that:

"Neither the trial court nor the High Court has jurisdiction to bypass the minimum limit prescribed by law on the premise ...[of] a plea-bargain."

However, Malimath Committee Report³⁸ unequivocally resounds in its recommendations that:

³⁴See, Section 265L.

³⁵Such statutes include:

Statute	Offences under Specific Provision(s)
Explosives Act, 1884	
Air Force Act, 1950	
Army Act, 1950	
Navy Act, 1957	
Cinematograph Act, 1952	
Cable Television Networks (Regulation) Act, 1955	Sections 11 to 18
Essential Commodities Act, 1955	ü Provisions of Fruit Products Order, 1955 ü Provisions of Meat Food Products Order, 1973
Protection of Civil Rights Act, 1955	
Immoral Traffic (Prevention) Act, 1956	
Dowry Prohibition Act, 1961	
Wildlife (Protection) Act, 1972	ü with respect to animals that find place in Schedule I and Part II of the Schedule II ü related to altering of boundaries of protected areas
Indecent Representation of Women (Prohibition) Act, 1986	
Commission of Sati Prevention Act, 1987	
SC and ST (Prevention of Atrocities) Act, 1989	
Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992	
Juvenile Justice (Care and Protection of Children) Act, 2000	Sections 23 to 28
Delhi Metro Railway (Operation and Maintenance) Act, 2002	Sections 59 to 81 and 83
Delhi Metro Railway (Operation and Maintenance) Act, 2002	
Protection of Women from Domestic Violence Act, 2005	

³⁶(2000) 10 SCC 336.

³⁷(1999) 5 SCC 649, 650.

³⁸See, Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs, 2003.



By no stretch of imagination can the taint of legalising a crime will attach to it. It should not be forgotten that already the Probation of Offenders Act gives the court the power to pass a probation order. Further the powers of executive pardon, power of re-mission of sentences have already an element of not condoning the crime but lessening the rigour or length of imprisonment. In imposing a sentence for a lesser offence or a lesser period the community interest is served and it will facilitate an earlier resolution of a criminal case, thus reducing the burden of the court. Perhaps it would even reduce the number of acquittals for after prolonged trial it is quite possible that the case may end in acquittal.³⁹

It is apparent that the concept of "plea bargaining" is a new transplantation attempted as a policy to enable certain ends for faster justice delivery, reduction in pendency of criminal cases etc. While the concept has been substantially indigenised to suit Indian judicial system with inbuilt control mechanisms, still has not been sufficiently accepted. However, the merits of the concept have been acknowledged sporadically.

Part III

The Judicial Dichotomy and Evolving Jurisprudence

In this part an attempt to project the stark contrast of embracing the concept with that of repudiating the same with an antagonistic stance against it by the Apex court in India has been discerned. The judicial apathy towards the concept is palpable since its pre-legislative times. A brief tour on the dichotomy is evident and conspicuous by the series of Supreme Court judgments discussed hereunder. Traces of nascent jurisprudential

principles can also be seen as an evidence to the infantile status of the concept even at the end of a decade and a half after its formal induction into the CrPC as a distinct chapter viz. Chapter XXIA.

Jurisprudence on "plea bargaining" in India has been acknowledged at instances and discarded at other. It swings either ways, thereby exhibiting judicial inconsistency or typical initial teething problems. While on certain occasions the Apex court had ruled in favour, in others against it.

It may be noted that in *Ganeshmal Jashraj v. Govt. of Gujarat*⁴⁰, the apex court setting aside an enhanced punishment term by the High Court in appeal, suggested that assessment of evidence by the court for its credibility should be more "superficial and perfunctory" and "not critically". The court went on to hold that assessing the credibility of an evidence on account of a "plea bargaining" should be done:

"mechanically as a matter of formality in support of the admission of guilt. The entire approach of the court to the assessment of the evidence would be likely to be different when there is an admission of guilt by the accused."

Similarly, in *Thippaswamy v. State of Karnataka*⁴¹ the Court, in an attempt to truncate the unethical practice of initially inducing an accused to plead guilty on account of "plea bargaining" and subsequently ratcheting-up the penalty in appeal or revision, held it to be a clear violation under Article 21 of the Constitution of India. It was held that, such cases demand to be remanded back to the trial court by the courts of appeal, enabling the accused to defend himself against the charges levied against him. In the event if the trial court finds thereafter, the guilt is established, (s)he needs to be sentenced appropriately under the law.

³⁹Dr. Justice V.S. Malimath et al, Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs, at page 179, 2003.

⁴⁰(1980) 1 SCC 363.

⁴¹(1983) 1 SCC 194.

In a recent decision *Mallikarjun Kodagali v. State of Karnataka*⁴², the Apex court acknowledging the proactive gesture of legislature in enacting and introducing provisions relating to "plea bargaining" in the Chapter XXIA of the CrPC in held that:

Parliament ... has been proactive in recognising the rights of victims of an offence. One such recognition is through the provisions of Chapter XXI-A CrPC which deals with plea bargaining. Parliament has recognised the rights of a victim to participate in a mutually satisfactory disposition of the case. This is a great leap forward in the recognition of the right of a victim to participate in the proceedings of a non-compoundable case.

*State of Gujarat v. Natwar Harchandji Thakur*⁴³ expressed "plea bargaining" as a necessity considering the changed scenario of criminal justice dispensation and docket explosion in India. It went on to hold:

[W]e are, ... tempted to state and suggest that in view of the inordinate delay in disposal of cases in general and criminal cases in particular, and huge backlog of cases in Courts, in the changed circumstances, introduction of concept of "plea bargaining" in our Criminal Jurisprudence and jurisdiction requires re-thinking and re-consideration.

Scepticism and Rejecting views

In *Madanlal Ramchandra Daga v. State of Maharashtra*⁴⁴ the Court held:

[I]t is very wrong for a court to enter into a bargain of this character. Offences should be tried and punished according to the guilt

of the accused. If the court thinks that leniency can be shown on the facts of the case it may impose a lighter sentence. But the court should never be a party to a bargain by which money is recovered for the complainant through their agency. We do not approve of the action adopted by the High Court.

In *Kasambhai Abdulrehmanbhai Sheikh v. State of Gujarat*⁴⁵ and *Kachhia Patel Shantilal Koderlal v. State of Gujarat*⁴⁶, the Court held "plea bargaining" to be un-constitutional and illegal in nature. It opined that such practice is likely to encourage corruption, collusion and pollute the pure fount of justice. The court further went on to hold that:

[C]onviction based on the plea of guilty entered ... as a result of plea bargaining cannot be sustained. It is ... contrary to public policy to allow a conviction to be recorded against an accused by inducing him to confess to a plea of guilty on an allurement ... that if he enters a plea of guilty, he will be let off very lightly. Such a procedure would be clearly unreasonable, unfair and unjust and would be violative of ... Article 21 of the Constitution It would have the effect of polluting the pure fount of justice, because it might induce an innocent accused to plead guilty to suffer a light and inconsequential punishment rather than go through a long and arduous criminal trial which, having regard to our cumbrous and unsatisfactory system of administration of justice, is not only long drawn out and ruinous in terms of time and money, but also uncertain and unpredictable in its result and the Judge also might be likely to be deflected from the path of duty to do justice and he might either

⁴²(2019) 2 SCC 752. Also, reiterated in *Amir Hamza Shaikh v. State of Maharashtra*, (2019) 8 SCC 387, 394.

⁴³2005 SCC Online Guj 320; 2005 Cri LJ 2957.

⁴⁴(1968) 3 SCR 34, 39.

⁴⁵(1980) 3 SCC 120.

⁴⁶1980 Cri.L.J. 553



convict an innocent accused by accepting the plea of guilty or let off a guilty accused with a light sentence, thus, subverting the process of law and frustrating the social objective and purpose of anti-adulteration statute. This practice would also tend to encourage corruption and collusion and as a direct consequence, contribute to the lowering of the standard of justice. There is no doubt in our mind that the conviction of an accused based on a plea of guilty entered by him as a result of plea bargaining with the prosecution and the Magistrate must be held to be unconstitutional and illegal.⁴⁷

In *State of U.P. v. Chandrika*⁴⁸, the court held that:

[I]t is settled law that on the basis of plea bargaining the court cannot dispose of the criminal cases. The Court has to decide it on merits. If the accused confesses his guilt, an appropriate sentence is required to be imposed. ... Mere acceptance or admission of the guilt should not be a ground for reduction of sentence. Nor can the accused bargain with the court that as he is pleading guilty the sentence be reduced.

The above stand was reiterated in *Jeetu v. State of Chhattisgarh*⁴⁹.

An interesting jurisprudence evolved by the Apex court, in lieu of dislodging and decoupling incidences of petty fines and summary trials - often involving inexperienced young delinquents in traffic violations and the likes - from the ambits of getting "convicted" under "plea bargaining" to get rid of the unnecessary odds and rigours of a *lis*. The court directed the legislature to reconsider

the scope and contours of the concept of "plea bargaining" back in 1996. The court in *Pawan Kumar v. State of Haryana*⁵⁰ (1996) 4 SCC 17, held:

[W]e hereby draw the attention of Parliament to step in and perceive the large many cases which per law and public policy are tried summarily, involving thousands and thousands of people throughout the country appearing before summary courts and paying small amounts of fine, more often than not, as a measure of plea-bargaining. Foremost among them being traffic, municipal and other petty offences under the Penal Code, 1860, mostly committed by the young and/or the inexperienced. The cruel result of a conviction of that kind and a fine of payment of a paltry sum on plea-bargaining is the end of the career, future or present, as the case may be, of that young and/or inexperienced person, putting a blast to his life and his dreams. Life is too precious to be staked over a petty incident like this. Immediate remedial measures are therefore necessary in raising the toleration limits with regard to petty offences especially when tried summarily. Provision need be made that punishment of fine up to a certain limit, say up to Rs. 2000 or so, on a summary/ordinary conviction shall not be treated as conviction at all for any purpose and all the more for entry into and retention in government service. This can brook no delay, whatsoever.

Yet another jurisprudence evolved may be traced in the unwarranted (ab)use or misuse of the concept of "plea bargaining" to entrap an accused in his/her guilt to alter a punishment. The court in

⁴⁷(1980) 3 SCC 120, 124.

⁴⁸(1999) 8 SCC 638, 644.

⁴⁹(2013) 11 SCC 489, 495.

⁵⁰(1996) 4 SCC 17, 23.



*Ran Singh v. State of Haryana*⁵¹ thus in its word held:

The plea had been accepted by as high as the authority of the General Manager of the Haryana Roadways. The punishment already imposed on the appellant was not a small one but a major one and that too, without a formal enquiry. The General Manager, Haryana Roadways, could have nipped the whole affair in the bud by not encouraging the appellant making a bargaining plea. There is always some meeting of minds before such plea is put forth. Therefore, in the peculiar circumstances, the plea of the appellant need not entrap him in his guilt altering the highest punishment.

The contours and contradictions of "plea of guilty"⁵² and "plea bargaining" had been elaborately dealt in *State of Gujarat v. Natwar Harchandji Thakor*⁵³ wherein the court held that "plea-bargaining" and "plea of guilty", both things should not be treated as the same. The court opined that:

Every "plea of guilty", which is a part of statutory process in criminal trial, cannot be said to be a "plea bargaining" *ipso facto*. It is a matter requiring evaluation at factual profile of each accused in criminal trial before reaching a specific conclusion of it being only a "plea bargaining" and not a plea of guilty simpliciter. It must be based upon facts and proof not on fanciful or surmises without necessary factual supporting profile for

that...

It cannot be contended that, whenever, the "plea of guilty" is raised, then less than minimum sentence [be] awarded...It has to be proved and shown to the satisfaction of the Court. It cannot be straightway deduced.

Therefore, there appears to be a divided jurisprudence on application of the Chapter XXIA of CrPC. Moreover, the courts are cautious to discern between the attempt to conflate "plea bargaining" with "plead guilty" as a tool potential to confuse the criminal courts and put to misuse. However, this being a green field awaits novel jurisprudential green-shoots.

Part IV

Juxtaposing the Idea of "Plea Bargaining": US v. Indian Positions

In this part the conceptual differences and the impact of "plea bargaining" has been attempted. It is argued that many academic and judicial debates have erroneously contemplated the idea and ramifications of "plea bargaining" in India straight through the lenses of its operations in US. The positions in both the countries being significantly distinct though. The criminal justice system of US as compared to India projects certain stark contrasts.⁵⁴ While the former generally is skewed to be a more retributive model with more severe and larger scope of penal sentencing, the India criminal jurisprudence appears to be more reformative and the Indian Penal Code suggests comparatively a much lesser quantum of

⁵¹(1998) 8 SCC 738, 739.

⁵²Section 240(2) and 241 of CrPC.

⁵³2005 SCC Online Guj 320: 2005 Cri LJ 2957.

⁵⁴See, Rupesh Aggarwal and Arnav Behra, *Plea Bargaining in India: Striking a New 'Deal' with Criminal Jurisprudence*, [2017]6.1 NULJ 139, 145.



sentencing.⁵⁵ This perhaps may be one of the distinguishing facts wherein the gravity and quantum of punishment under the US system on conviction becomes an inducing factor to consider "plea bargaining" as a rational trade-off for the accessed.

Stretching further the argument contextually, the appointment of judges in US being a popular election exercise, there is a direct nexus for a judge to pose a public image of being stern on thwarting crime. Thereby reposing public trust on him/her and the institution by awarding stricter sentences. However, an India judge is under no such pressure owing to independence of judiciary and its autonomy owing to doctrine of separation of power. Hence, an accused is not apprehensive on facing trial atleast on account of a judge bridled to public voting.

Statutorily, it may be noteworthy that "plea bargaining" in US is applicable to almost any act or omission criminalised by law. Only 2 per cent of [F]ederal criminal cases—and a similar number of [S]tate cases—are brought to trial. More than 90 per cent of convictions, at both federal and state levels, are the result of guilty pleas.⁵⁶ The indiscriminate concept is conflated in the criminal justice system of US to an extent that:

"[b]y one estimate, a criminal case is disposed of by "plea bargaining" every two

seconds during a typical work day in America."⁵⁷

American Bar Association's (ABA) "Standards Relating to Pleas of Guilty"⁵⁸ stipulates that a trial judge should not participate in plea discussions and that a judge should enter into the plea bargaining process.⁵⁹ The policy is juxtaposed to the Indian mandate, wherein the application for "plea bargaining" has to be made to the court where the trial is to be conducted.⁶⁰ Moreover, the judge *shall* examine the accused *in camera*, in absentia of the prosecution or complainant to ensure voluntariness of the accused and rule out any form of coercion or tutoring.⁶¹ However, Indian statute under Chapter XXIA CrPC has carefully limited its application by carving out statutory exceptions as discussed in Part II above.⁶²

It may be noted that one of the major difference in operating the concept between the US and Indian versions is that, in India the procedure is to be rolled out by the accused as against the US wherein, the initiation is the job of the prosecution. This may be a major impediment in effective implementation of concept, owing to the simple reason that awareness on part of accused (about the advantages of "plea bargain") is at its lowest ebb. Accused is almost always at the mercy of the prosecution on their sharing to avail the fruits,

⁵⁵In 21st century India executed 8 persons with 5 execution orders, as compared to 2128 in US. It may be noted that the year 2020 accounted for 4 executions in India (*Nirbhaya Case*), which is highest number in a year in several decades, whereas 18 executions were there in the corresponding period in US (notwithstanding the fact that there has been a steep down trend is the year wise decadal US execution records.). Source: <https://deathpenaltyinfo.org>. Last accessed 15-02-2022.

⁵⁶Ram Subramanian, Léon Digard, Melvin Washington II, and Stephanie Sorage, *In the Shadows: A Review of the Research on Plea Bargaining*, Vera Institute of Justice, Sept, 2020.

⁵⁷Id at page 1.

⁵⁸See, ABA Standards Relating to Pleas of Guilty, § 3.3 (Approved Draft, 1968).

⁵⁹See, *Anderson v. State*, 335 N.E.2d 225 (1975). Also see, *Ex parte Shufflin*, 528 S.W.2d 610, 617 wherein it was held that "A trial judge should not participate in plea discussions or negotiations until an agreement has been reached between a defendant and the State."

⁶⁰Section 265B(1)

⁶¹Section 265B(4)

⁶²See section 265A of the CrPC which indicates such exclusions as: "serious offences" punishable with death or life sentences, crimes affecting "socio-economic conditions" and crimes against women and children. Also see, the list of offences under statutes discussed at Fn. 37.

rendering a curtailed sense of voluntary access to justice mechanism. Whereas an Indian judge has been vested with the discretion to (dis)allow a "plea bargain" the US judge does not enjoys any such discretion. Moreover, a plea bargained under the US law is final, the Indian law provides for reconsiderations under Articles 136, 226 and 227 of the Constitution of India.

Therefore, a strait-jacket comparison of the concept of "plea bargaining" would be misleading and unjustifiable.

The myth that "plea bargaining" trades-off justice with speedy disposal may not be accurate as the process only limits and offsets quantum of sentence(s) or charge(s) and does not syphon acquittal bypassing the trial.⁶⁴

Part V

Conclusion & Suggestions

To conclude, it may be optimum to evaluate that in a developing economy like India with marginalized population, with poverty looming large and limited resources, the sword cuts both ways. People are compelled or self-prompted to opt "plea bargaining" as a temporary panacea to the threats posed by the maladies of exceptionally protracted *lis*, propelling an accused (who eventually might secure acquittal) to the quagmire of monetary debt. However, "plea bargaining" is a conscious choice available to the accused which does not precludes him from availing a trial. On the contrary, militating the concept of "plea bargaining" against trial does not prohibit an accused to "plead guilty" (in a routine trail), succumbing to the psychological pressures of potential protracted litigation,

expenses to defend him/herself, and the quantum of punishment.

The Legal Services Authorities Act, 1987 is a potent inoculation tool to prevent such menace. It is suggested that a conflation of legal aid with "plea bargaining" should augment and synergise justice delivery and impact on the docket explosion. The same has the potential to make a major dent to the hydra-headed monster of ever growing pendency of criminal cases.

Awareness of accused of the provision of "plea bargaining" under the CrPC appears to be a bottleneck in its free exercise as a potent remedy. Therefore, it is an inherent duty of the courts to make the accused aware to his/her "plea bargaining" option. The same may be cultured as a procedural convention or even be included as a statutory provision under Section(s) 164(1) and 304 CrPC as a necessary ingredient for fair trial.

It may be contextual to sketch out a comparative contours of Indian and the US versions of the concept of "plea bargaining", in order to critically examine and establish the stark differences in the structural and operational dissimilarities.

"Plea bargaining" in US is a prosecutor's show. The prosecution has access to all evidences, police support and forensic support and is the master of a criminal case with the judge outside theatre. This renders an accused significantly defenceless (atleast psychologically at initial stages). In India however, this prosecution power show is being mitigated by the Indian version of "plea bargaining" under Chapter XXIA of CrPC ensuring voluntary choices through judicial intervention.

⁶⁴See, Dr. Justice V.S. Malimath, Committee on Reforms of Criminal Justice System, Government of India, Ministry of Home Affairs, at page 179, 2003, wherein the Malimath Committee recommended that:

If the compounding offences is there in the statute even under old Cr.PC. there is no reason why, when the accused is not let off but he is sentenced for a lesser sentence plea bargaining should not be included in the Criminal Justice System, so that the object of securing conviction and also reducing the period of trial can be achieved and reduced pendency can also be achieved in "one go"

Role of Media in Juvenile Delinquency: A Case Study of National Capital Region of Delhi



Sachin Kumar*

Abstract

Despite vast research in the field on the role of media in the life of children little is known about its impact on the lives of incarcerated juveniles. This paper analyses the media content consumption pattern among delinquent juveniles and aims to elucidate the intricate relationship between media exposure and juvenile delinquency. For this study purpose, a sample comprising 443 delinquent juveniles was structurally interviewed, and to assess their media exposure the Content-based Media Exposure Scale (C-ME) as developed by Den Hamer et al. (2017) was employed. Our results showed a higher antisocial media content exposure among delinquent juveniles. Analysis of Variance (ANOVA) test reported significant differences in pro-social media content consumption scores under different crime heads whereas the antisocial media content consumption score was not found significantly different. Further ANOVA test shows a significant difference in both antisocial and pro-social media content consumption scores under categories of heinous/non-heinous crimes and violent/non-violent crimes.

Keywords: Juvenile, Delinquency, Antisocial, Pro-social, Media, ANOVA

Introduction

Today, our social environment is notably saturated with communication technology which has an impact on our lives. With the availability and widespread access of televisions, computers, tablets and smartphones in almost every house, children surrounded with these electronic gadgets spend more time on screen. Despite the potential education and entertainment benefits associated with these devices, excessive use of

screen have adverse implications on holistic development, the formation of values and beliefs and the overall well-being of children (Huesmann, 2007). Children spend an average of seven hours on screens of TV, computers, phones and other electronic devices. Notably, the advertisements targeting children are not confined to T.V. but extend to personal devices, thereby moulding children's behavioral patterns. Children are now exposed to information from

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social media influencers, covert marketing strategies embedded within video games, extensive data collecting across several platforms, virtual reality encounters with strangers in games and particularly targeted social media advertisements that are meant to elicit specific behavior in children (American Academy of Pediatrics, 2021).

Studies conducted over the past decades have consistently shown a correlation between exposure to violent media through movies and video games and the likelihood of engaging in violent and aggressive behavior (Murray, 2008). A meta-analysis study on the impact of video game violence on aggression shows that playing violent video games increases aggressive thoughts and decreases empathy and pro-social behavior (Anderson et al., 2010). The advent of global communication and electronic media has provided society with a "virtual" bad street as an alternative to the real bad street which was previously influencing very few youths. This virtual replication within electronic media may produce an amplified array of negative attitudes and antisocial behavior at a very large scale (Huesmann, 2007).

Research on short-term and long-term exposure to violence has given us refuted evidence that exposure to media violence increases aggression and violent behavior towards others (Anderson et al., 2003). In another study, Bushman and Huesmann (2006) hypothesized that short-term media violence results in aggression, and it was observed greater among adults than for children in laboratory studies, and greater for children than adults in longitudinal studies. This was consistent with the theory that long-term effects necessitate the learning (encoding) of new scripts, schemas, or beliefs, whereas short-term effects are mostly caused by the stimulating of already well-encoded scripts, schemas or beliefs. In comparison to adults, young minds can more efficiently acquire new scripts, schemas and beliefs through observational learning.

Researchers have compared the participants on different degrees of media violence exposure for a long period. It was reported that participants with low levels of media violence exposure (L-MVE) showed lower levels of aggression and participants with higher levels of media violence exposure (H-MVE) showed higher levels of aggression. However the level of aggression rises with an increase in both cases but the H-MVE group shows a much greater increase in aggression (Han et al., 2020).

Social Media- A Source of Inspiration for the Youth

Researchers have defined the term media violence as "portrayals of acts of physical aggression by one human or human-like character against another". Different theories have evolved on the effect of media violence and the kind of media violence that teaches viewers to do violence (Huesmann, 2007). Exposure to media violence influences the methodology and intensity of crime. In India, many news reports highlight the role of violent media and violent games in inspiring youth to adopt the methods and tools for crime. In the next two sections, we will discuss this in detail.

Understanding the Role of Indian Cinema

Numerous instances have been documented wherein individuals have purportedly drawn inspiration and adopted a particular modus operandi from narrative depictions in Hollywood and Bollywood movies. Notably, the accused in the Shraddha Walkar's murder case cut the body into thirty pieces and dumped the parts into the forest over three months. The accused accepted that he was inspired by the main character "Dexter Morgan" from the American show "Dexter". An incident in Delhi involving a teenager who reportedly killed a disabled person after getting motivated by the movie "Tu Chor Main Sipahi". The accused juvenile reportedly tried to copy the character of the movie by leaving behind a glove on the bedside and



writing the codeword "Killer King" in the bathroom (Sengar, 2022).

The manifestation of inspiration is not limited to criminal activities only as exemplified by a murder case involving three teenagers. The incident unfolded when a 24-year-old man objected to the juveniles engaging in the traditional Indian game of GilliDanda at a local park in North-West Delhi. They later revealed to the police that they were inspired by the Telugu crime movie Pushpa-The Rising. They were so mesmerized by the movie that they imitated the appearance of the lead actor and formed a gang called "Badnaam" with 10-15 juveniles. They not only stabbed the man to death but fellow juveniles recorded the incident and intended to post it on social media for greater popularity (Express, 2022). Juveniles sometimes take advantage of their legal status as minors. In a similar case, Delhi police apprehended the minor who was taking advantage of his status in cases of committing crimes such as murder and robbery. The boy was inspired by the character "Maya Bhaiya" from the Bollywood film "Shootout at Lokhandwala.". The boy and his associates posted their illegal activities on Instagram and bragged about their future activities and relationships with other criminals (Statesman, 2023). In another incident, movie "KGF" inspired a 19-year-old youth to kill five people. When apprehended, the youth confessed that he wanted to become famous (Odisha TV Bureau, 2022).

There is an increasing acceptance of the objectification of females in songs of Bollywood movies. Songs in movies have become more sensuous, over-sexualized and showcase women as objects of male desire. Item songs usually depict the women dancers or lead role actresses as surrounded by men while dancing. Performance of actors, dance moves, music lyrics and nudity create an imagination of the availability of women for sexual performances. Women in Bollywood are rarely shown as acting

independently and challenging the patriarchal norms (Wazir, 2013).

Jain et al. (2019) shows that out of 125 songs selected for the study, In Over 83 percent of songs, female dancers were touched intimately, male gazing at women was present and as expected a thin female dancer was taken. This gave strength to the notion that the female body can be commodified, and can be used for pleasure by males. This not only enforces a patriarchal setup on females but also influences the behavior of teens to become thin and look attractive and impose a false notion among the consumer of such media. Teens are highly pressured by the advertisements on TV to look smart and thin, wear skimpy clothes and use cosmetic products (Das and Sharma, 2016).

Contemporary Indian cinema has witnessed a notable trend of glorifying substance use which directly gives a message to the audience. Further, Merchant (2013) shows that glamorized portrayals of substance use in movies have the potential to harm children. Due to digitalization and ineffective implementation of film certificate guidelines, children have easy access to these messages. Jain et al. (2019) show that out of 125 songs selected for research 71 percent of songs depict some kind of substance use with alcohol most frequently and 28 % are found to showcase both alcohol and cigarette use.

These particular instances reflect the intricate dynamics between media consumption and potential repercussions on individual behavior within the realm of criminal activities.

Understanding the Role of Violent Video Games

Playing of violent video games has been associated with an increase in violent behavior among juveniles. Two studies conducted by researchers Anderson and Dill (2000) provided significant insight into the level of aggressive thoughts and behavior in youth which increased with an increase in violent graphic exposure and

aggressive gaming. Violent video games are interactive and engage the individual with multiple senses and they become more dangerous than violent media. The study also highlights that due to violent gaming, the aggression level in individuals with an aggressive nature is more prone to temporary aggression. Anderson et al., (2008) further extended that violent video games increase the physical aggression level of children and adolescents after a few months of playing such video games. These findings contradict the hypothesis that habitually aggressive children will become more aggressive if repeatedly exposed to violent video games.

In recent times, the phenomenon of mass shootings in Western countries by juveniles has become a subject of extensive debate. However, these are intricately linked with easy access to guns, mental health problems etc. Previous research has highlighted that young mass shooters are more likely to get illegal weapons, admit to copying someone else and have a history of abuse in the past. This may be attributed to their immaturity, rebellious nature, inability to regulate impulses, peer pressure, lack of positive role models and through media content. Lankford and Hoover (2019) emphasize a commonality of illegal acquisition of weapons.

The video game industry has emerged as a prominent industry in India and the top market in the world in terms of video gaming. It has evolved from a non-existent state in the 1990s to currently holding a leading position in the global gaming market. In recent times, India has witnessed a surge in popularity and addiction to the games. It can be understood with the example of PUBG (Player Unknown's Battlegrounds Mobile). PUBG became a popular game in India after being launched in 2018. In 2020, it became the most downloaded game with 175 million downloads (Partleton, 2019). The COVID-19 pandemic time in India is seen as a tipping point for gaming consumption in India

(KPMG, 2021). It became worse during the pandemic, the Google Play Store reported an increase in game downloads by 51% and the iOS app store reported a 20 percent increase in game downloads. Despite the immense popularity, certain ill effects of violent games can be seen (Singh, 2021). KPMG report shows that the highest downloads of the games were on mobile phones (94%), followed by PC (9%) (KPMG, 2021). In India PUBG game was banned in 2020 owing to its origin in China but a South Korean game company came out with the same game (Battlegrounds Mobile India) with little cosmetic changes and thus bypassed the government prohibition (Sidhwani, 2021). Several state governments have banned online games such as PUBG to curtail distraction during exam times. Online regulation was drafted in Andhra Pradesh in 2020 in response to the financial debts due to gaming. Karnataka has extended the ban on the games that require entry fees (Press Trust of India, 2020; Chander and Kalra, 2021).

Compelling evidence points to children's apparent increase in violence as a result of their increasing video game addiction. Designers of video games influence player behavior by design strategies such as offering incentives and rewards. This dynamic frequently leads to children who have trouble controlling their impulses or those who are having a hard time in school and are unaware of the repercussions of falling prey to the allure, good or bad, of video games.

It is well known that many intelligent students who are video game addicts have lost interest in both sports and academics. Some pupils become so engrossed in gaming that they lose touch with social graces like speaking and acting appropriately. Many people are being compelled to participate in lengthy counseling to recover soft skills like coherent speech.

Therefore, there is an urgent need for the regulation of the gaming industry in India. It is currently open to all. Games in different countries

are rated for several age groups and a wide range of strict laws govern this market. However, India lacks such a mechanism. India along with China has more than 1.5 billion users (more than 50 percent of users worldwide) followed by 715 million users in Europe and 200 million in USA (KPMG, 2021).

Some video games which are addictive, encourage racial and gender stereotypes, as well as killings in violent, warlike circumstances, conceal themselves with educational setup. The gaming companies worldwide train their highly talented experts in neuroscience, child psychology and human behavior, and gaming corporations lavishly pay them to create games that compel gamers to keep playing. Playing video games causes the brain's dopamine-producing neurochemical to be released, which urges the player to continue playing (Siddiqui, 2021).

Scientific studies indicate that playing video games alters the structure of brain regions related to higher cognition. Playing violent video games is associated with greater arousal and lower activity in brain regions responsible for self-control, according to studies employing brain scans. Falling grades, loss of sleep, exhaustion, irritability, increased anxiety when playing is stopped, obesity, aggressive behavior, a lack of interest in social contacts and other physical and mental activities necessary for healthy development are all effects of video game addiction (Anderson and Bushman, 2001; Kühn et al., 2019; Smirni et al. 2021).

Understanding why and how violent media promote hostility is essential if one wants to comprehend the empirical study that links it to being a threat to society. In actuality, psychological explanations for why media violence poses such a danger are now firmly established. Additionally, these ideas clarify why witnessing aggression in real-world situations such as family, among peers and within the community also prompts the observer to act

aggressively. Both the short-term and long-term effects of violent content appear to be caused by somewhat distinct mechanisms and both of these processes seem to be independent of any potential time-distance effects that children's media consumption may have. The term "time displacement effects" refers to how the mass media, especially video games, substitute reading, sports and other activities in children's lives (Huesmann, 2007) This can result in short-term and long-term effects like primary arousal and mimicry.

The long-term effects have a long-lasting influence on the mind and behavior of the observer. During the adult stage, children encode the observed pattern of community and media and the children's horizon about their culture expands. As children became adults their beliefs crystallize and start to filter the inappropriate behavior. These normative behaviors are partly influenced by the mass media and their observation of mass media. Mass media exposure also increases a particular kind of response attitude. Frequent exposure makes a child "Desensitized" which normalizes the resultant increase in the heart rate, perspiration, and discomfort (Huesmann and Kirwil, 2007). Enactive learning also plays an important role along with observational learning and desensitization. Children are continuously forced to behave in a certain way to achieve goals in video games. It is more continuous in games involving multiplayer who are not only active observers but also participants in violent games. The risk of violent behavior from games is much greater than T.V. or internet display of violent acts. While considering these aspects, it is imperative to study the role of media in the lives of juveniles.

Tools and Techniques

For the study purpose, 443 juveniles from observation homes located in the National Capital Region of Delhi were interviewed. Initially, participants were queried about their access to media through TV/Internet before

coming to the observation home. Further in-depth questions were asked regarding the content consumed by the juveniles. Responses were recorded in five options "Never" "Hardly Ever" "Sometimes" "Often" and "Very Often".

For the current study, Content-based Media Exposure Scale (C-ME) as developed by Den Hamer et al., (2017) is used. Previous scales as devised by found to be non-sufficient and were specific to TV or video games (Jordan et al., 2007; Lee et al., 2008). Compared to the studies that used the C-ME Scale, it reported that C-ME is valid, reliable, and easy to use (Den Hamer, 2016). Two variables were measured through this scale

namely Anti-social media consumption and Pro-social media consumption.

Results and Discussion

Table 1 provides information regarding the presence and absence of electronic mass media in the homes of delinquent juveniles. Among the cohort of delinquent juveniles under examination, it was observed that 74.49% of delinquent juveniles have access to mobile phones and 79.91% of delinquent juveniles reported accessibility to TV/LCD at their homes. Whereas among all three types of electronic devices examined, the least accessibility was reported for laptops (5.19%). Figure 1 represents the same with the help of a bar graph.

Table 1

	Mobile Phone		TV/LCD		Laptop	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Yes	330	74.49	354	79.91	23	5.19
No	113	25.51	89	20.09	420	94.81
Total	443	100.00	443	100.00	443	100.00

Source: Primary Survey, 2023

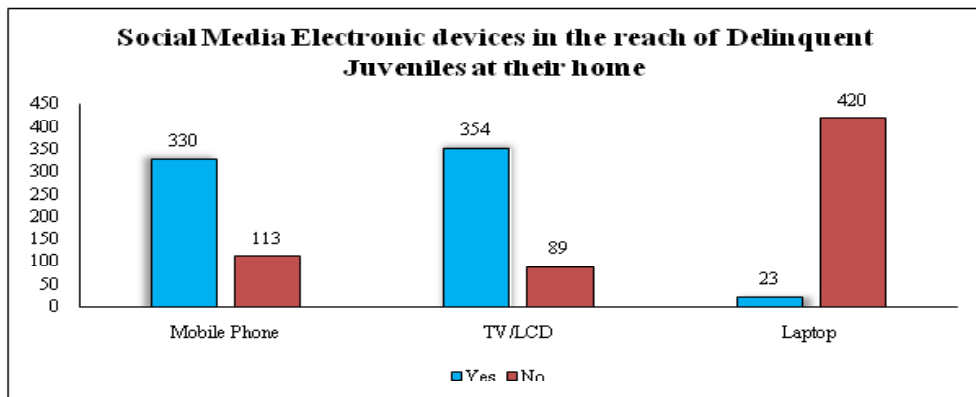


Figure 1

Antisocial Media Consumption among Delinquent Juveniles

Table 2 provide responses on the status of anti-social content consumption among delinquent juveniles and provides data regarding how often these juveniles watch people engaging in

antisocial activities on various media platforms, such as the Internet, TV, games, mobile phones, and DVDs. Nearly 99% of the juveniles reported a positive response regarding watching people fighting. 15.8% of delinquent juveniles reported consuming content very frequently, 42.44% responded positively to consuming this media



content frequently and 39.28 % reported consuming this media content sometimes. 2.48 % of juveniles responded to consuming this media content hardly ever and never.

In response to the question of how frequently juveniles watch people who openly talk about

sex on various media platforms. The most common response of respondents was sometimes with 32.73% of respondents falling into this category. 40.18% and 12.87% of respondents reported that they frequently and very frequently engaged in such content consumption (Table 2).

Table 2: Status of Antisocial Content Consumption among Delinquent Juveniles

Questions: How often do you watch (on the Internet/TV/games/mobile phone/DVD) people?	Responses	Frequency	Percent Percentage	Cumulative
Who fights?	Never	2	0.45	0.45
	Hardly Ever	9	2.03	2.48
	Sometimes	174	39.28	41.76
	Often	188	42.44	84.2
	Very Often	70	15.8	100
Who openly talks about Sex?	Never	10	2.26	2.26
	Hardly Ever	53	11.96	14.22
	Sometimes	145	32.73	46.95
	Often	178	40.18	87.13
	Very Often	57	12.87	100
Who uses Drugs/Alcohol?	Never	6	1.35	1.35
	Hardly Ever	41	9.26	10.61
	Sometimes	225	50.79	61.4
	Often	117	26.41	87.81
	Very Often	54	12.19	100
Who destroys someone else's belongings?	Never	1	0.23	0.23
	Hardly Ever	7	1.58	1.81
	Sometimes	190	42.89	44.7
	Often	192	43.34	88.04
	Very Often	53	11.96	100
Who Steals?	Never	2	0.45	0.45
	Hardly Ever	5	1.13	1.58
	Sometimes	208	46.95	48.53
	Often	167	37.7	86.23
	Very Often	61	13.77	100
	Total	443	100	

Source: Primary Survey, 2023

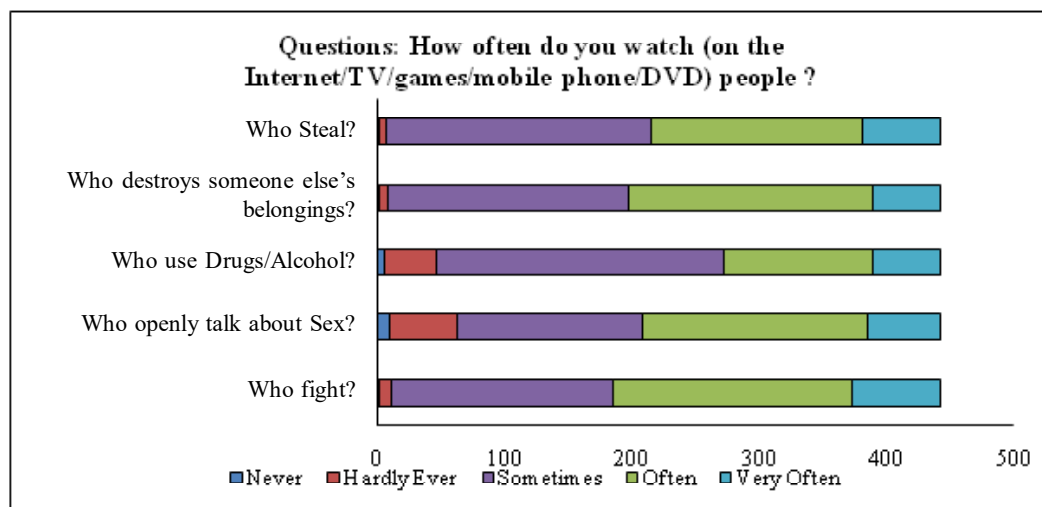


Figure 2

In addition, it further focuses on their exposure to people who use drugs or alcohol through various media platforms. 50.79 % of participants reported occasional consumption of this content. 26.41% of respondents reported frequent, and 12.19% of respondents reported high and consistent exposure to such content. 1.35% of juveniles reported that they never watch people using drugs or alcohol. 9.26% of the participants reported minimal exposure to such content (Table 2).

In response to the question of watching people destroying someone else's belongings, 42.89% of participants reported that they watch this type of content occasionally. 43.34% of participants reported that they frequently watch people destroying someone else's belongings. 6.09% of respondents reported high and consistent exposure to such content. Further, a significant portion of respondents indicated that they sometimes (46.95%) or often (37.7%) watch people who steal. This suggests that a large proportion of delinquent juveniles are regularly exposed to antisocial content, which could potentially influence their behavior. The fact that 13.77% of respondents watch people who steal very frequently is concerning. It indicates that a

substantial number of delinquent juveniles are regularly exposed to antisocial content that promotes criminal behavior (Table 2).

Pro-social Content Consumption among Delinquent Juveniles

Pro-social content is content that is socially beneficial and has a positive impact on the viewers. Some of the examples may include educational shows, biographical movies, anti-bullying campaigns and documentaries on social issues. Exposure to pro-social media content increases the accessibility of good thoughts, empathy, and related cognitive factors. It increases factors associated with aggressive behavior (Greitemeyer, 2011). Here in this section, we will discuss pro-social content consumption among delinquent juveniles.

Table 3 provides responses to questions related to the status of pro-social content consumption among delinquent juveniles over various media platforms. Nearly 12.64% of juveniles reported that they never watch people being nice to another person, and 13.54% of juveniles reported having hardly ever watched such content. While

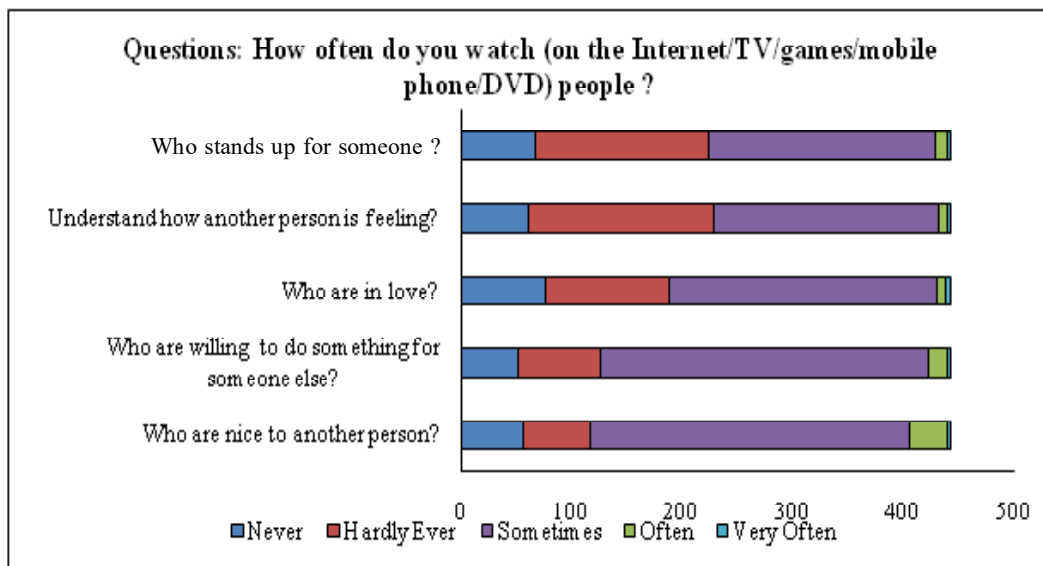


Table 3: Status of Pro-social Content Consumption among Delinquent Juveniles

Questions: How often do you watch (on the Internet/ TV/games/mobile phone/ DVD) people?	Responses	Frequency	Percent	Cumulative Percentage
Who are nice to another person?	Never	56	12.64	12.64
	Hardly Ever	60	13.54	26.18
	Sometimes	290	65.46	91.64
	Often	34	7.67	99.31
	Very Often	3	0.68	100
Who are willing to do something for someone else?	Never	52	11.74	11.74
	Hardly Ever	74	16.7	28.44
	Sometimes	296	66.82	95.26
	Often	18	4.06	99.32
	Very Often	3	0.68	100
Who are in love?	Never	76	17.16	17.16
	Hardly Ever	112	25.28	42.44
	Sometimes	242	54.63	97.07
	Often	8	1.81	98.88
	Very Often	5	1.13	100
Understand how another person is feeling?	Never	60	13.54	13.54
	Hardly Ever	168	37.92	51.46
	Sometimes	204	46.05	97.51
	Often	7	1.58	99.09
	Very Often	4	0.9	100
Who stands up for someone?	Never	66	14.9	14.9
	Hardly Ever	158	35.67	50.57
	Sometimes	205	46.28	96.85
	Often	10	2.26	99.11
	Very Often	4	0.9	100
Total		443	100	

Source: Primary Survey, 2023

Figure 3



73.83% of juveniles responded that they watched this media content ranging from sometimes to very often. Similar results were reported in response to the question of watching people who are willing to do something for someone else.

Further, in response to the question of watching people who are in love, 17.16% of juveniles responded never watched such media content and 25.28% of juveniles responded with watching this media content hardly ever (Table 3).

In response to the question of how often juveniles watch people understand how another person feels, 13.54% of delinquent juveniles responded that they never watched. 37.92% responded that they hardly ever watch people and 46.05% responded that they watch such media content sometimes. Similar responses were reported in response to the question of how often juveniles watched people who stand for someone else (Table 3).

Table 3 provides responses to questions related to the status of pro-social content consumption

among delinquent juveniles over various media platforms. Nearly 12.64% of juveniles reported that they never watch people being nice to another person, and 13.54% of juveniles reported having hardly ever watched such content. While 73.83% of juveniles responded that they watched this media content ranging from sometimes to very often. Similar results were reported in response to the question of watching people who are willing to do something for someone else.

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Table 4: Response of Delinquent Juveniles to the Antisocial Questions across different Crime Heads.

How often do you watch (on the Internet/TV/games/mobile phone/DVD) people ...who fight?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	50.00	25.00	25.00
Arson/Public Disorder	8.33	0.00	25.00	50.00	16.67
Murder	0.00	0.00	37.84	42.16	20.00
Others	0.00	0.00	36.84	52.63	10.53
Rape	0.00	0.93	52.34	42.99	3.74
Robbery	0.00	0.00	12.00	52.00	36.00
Theft	1.10	8.79	36.26	37.36	16.48
Pearson chi2(24) = 76.3979 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people ...who openly talk about Sex?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	25.00	0.00	25.00	25.00	25.00
Arson/Public Disorder	33.33	0.00	8.33	58.33	0.00
Murder	1.08	18.92	41.62	31.35	7.03
Others	0.00	10.53	57.89	31.58	0.00
Rape	0.00	0.00	42.99	31.78	25.23
Robbery	4.00	4.00	12.00	60.00	20.00
Theft	2.20	16.48	42.86	26.37	12.09
Pearson chi2(24) = 132.6018 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people ...who use Drugs/Alcohol?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	25.00	0.00	0.00	50.00	25.00
Arson/Public Disorder	8.33	0.00	33.33	58.33	0.00
Murder	2.16	7.03	51.89	28.11	10.81
Others	0.00	10.53	78.95	10.53	0.00
Rape	0.00	15.89	54.21	20.56	9.35

Continued.....



Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Robbery	0.00	0.00	28.00	40.00	32.00
Theft	0.00	9.89	49.45	24.18	16.48
Pearson chi2(24) = 69.0763 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...who destroys someone else's belongings					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	75.00	0.00	25.00
Arson/Public Disorder	0.00	0.00	50.00	33.33	16.67
Murder	0.54	2.70	36.22	44.86	15.68
Others	0.00	0.00	42.11	47.37	10.53
Rape	0.00	0.93	55.14	41.12	2.80
Robbery	0.00	0.00	20.00	56.00	24.00
Theft	0.00	1.10	51.65	36.26	10.99
Pearson chi2(24) = 33.4270 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...who Steal?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	0.00	75.00	25.00
Arson/Public Disorder	0.00	0.00	33.33	50.00	16.67
Murder	1.08	1.08	42.16	40.00	15.68
Others	0.00	0.00	42.11	47.37	10.53
Rape	0.00	1.87	59.81	37.38	0.93
Robbery	0.00	0.00	32.00	40.00	28.00
Theft	0.00	1.10	50.55	27.47	20.88
Pearson chi2(24) = 38.6949 Pr = 0.029					

Source: Calculated by Researcher based on interviews of Delinquent Juveniles.



reported in response to the question of how often juveniles watched people who stand for someone else (Table 3).

Table 4 provided a comprehensive breakdown of responses of delinquent juveniles falling in different crime categories, concerning their habit of watching antisocial activities across various social media platforms.

In response to the first question regarding watching fighting, 50 percent of Arms Act category juveniles reported watching fighting scenes occasionally and the remaining 50 percent reported watching it frequently or very frequently. It is concerning to know that nearly half of the juveniles with arson/public disorder charges had watched these scenes frequently and 16.67 reported watching it very frequently. Nearly 42% of murder-category juveniles reported watching fighting scenes and 37.84% reported to have watched it occasionally. In the category of Other crimes juveniles, 52.63% have watched it frequently and 10.53 watched it regularly and consistently. Juveniles with rape charges have watched these scenes occasionally (52.34%) and frequently (42.99%). Juveniles with robbery charges have watched these scenes frequently (52%) and consistently (36%). Juveniles with theft charges have watched it occasionally (36.26%) and frequently (37.36%). Further, the table also provides the results of a Pearson Chi-Square test, which is a statistical test used to determine if there is a significant association between two categorical variables. In this case, the test examines the association between the crime categories and the frequency of exposure to violent content. The Pearson Chi-Square statistic is calculated as 76.3979, and it has 24 degrees of freedom (df). The "Pr" (probability) value is reported as 0.000. This low p-value indicates a highly significant association between the crime categories and the frequency of exposure to fighting content on social media.

In response to the second question about

watching people who talk about sex on different social media platforms, juveniles with arms act reported watching 25 percent each in the category of never, sometimes, often, and very often. 58.33% of the juveniles with arson/public disorder charges watched these scenes frequently and 33.33% reported never watched these scenes. It has been very concerning that juveniles with rape charges watch these scenes occasionally (42.99%), frequently (31.78%), and very consistently (25.23%). Juveniles with murder charges have watched these scenes rarely (18.92%), occasionally (41.62%), frequently (31.35), and very frequently (7.03%). Whereas juveniles with robbery charges watched these scenes frequently (60%) and very frequently (20%). Further table gave the Pearson chi-square statistics with a value of 132.6018 at $p < 0.05$ which indicates a highly significant association between crime categories and frequency of exposure to sexual talk on various media platforms.

The third question asked about the frequency of watching people taking drugs/alcohol over several media platforms. Juveniles with Arms Acts responded with frequent (50%) and very frequent (25%) consumption of such media content. Similarly, juveniles with charges of Arson/Public disorder reported watching such content frequently (58.33%) and occasionally (33.33%). Juveniles with murder and rape charges reported more than 50% of respondents consuming such media occasionally. It was noteworthy to mention that juveniles with rape, robbery, theft, and other charges had responded positively over watching such media content. The Pearson chi-square with a value of 69.07 at $p < 0.05$ shows that significant association between crime categories and frequency of exposure to this type of media content.

Over the question of watching people destroying someone else belongings, juveniles with Arms Act charges reported watching such media

content occasionally (75%) and very frequently (25%). Juveniles with arson charges watch such media content occasionally (50%), frequently (33.33%), and very frequently (16.67%) and juveniles with murder charges watch such media content occasionally (36.22%), frequently (44.86%) and very frequently (15.68%). Juveniles with Rape and theft charges watch such media content occasionally (more than 50 %) and frequently. Whereas juveniles with other charges watch such media content occasionally (42.11%) and frequently (47.12%). Further significant association (Pearson Chi-Square = 33.4270, Pr = 0.000) was reported between different crime categories and such media consumption.

In response to the question related to juveniles watching people steal in different media sources. More than 50% of juveniles with charges of Arms Act and arson/public disorder reported frequently watching such media content.

Juveniles with murder, rape, and other charges watch such media content occasionally (more than 40%), frequently (more than 40%), and consistently. Juveniles with robbery charges watch such media content frequently (40%) and consistently (28%). Whereas juveniles with theft charges watch such media content occasionally (50.55%), frequently (27.47%), and very frequently (20.88%). Further significant association (Pearson Chi-Square = 38.6949, Pr = 0.029) was not reported between the type of crimes and such media consumption.

Table 5 gives a detailed analysis of juveniles' responses to various prosocial questions regarding watching people who show some good social behavior over different social media platforms. In response to the first question regarding juveniles watching people who are nice to another person, juveniles with Arms Act

Table 5: Response of Delinquent juveniles to the Pro-social Questions across different Crime Heads.

How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...who are nice to another person?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	25.00	0.00	25.00	50.00
Arson/Public Disorder	41.67	16.67	25.00	16.67	0.00
Murder	12.43	15.68	63.78	7.57	0.54
Others	21.05	10.53	57.89	10.53	0.00
Rape	15.89	9.35	74.77	0.00	0.00
Robbery	0.00	4.00	64.00	32.00	0.00
Theft	7.69	16.48	68.13	7.69	0.00
Pearson chi2(24) = 203.6366 Pr = 0.000					

Continued.....



How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...who are willing to do something for someone else?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	0.00	25.00	75.00
Arson/Public Disorder	16.67	41.67	16.67	25.00	0.00
Murder	9.73	20.00	68.11	2.16	0.00
Others	10.53	26.32	63.16	0.00	0.00
Rape	13.08	15.89	71.03	0.00	0.00
Robbery	4.00	4.00	72.00	20.00	0.00
Theft	16.48	9.89	68.13	5.49	0.00
Pearson chi2(24) = 393.9934 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...who are in love?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	0.00	25.00	75.00
Arson/Public Disorder	25.00	25.00	16.67	33.33	0.00
Murder	19.46	47.03	30.81	1.62	1.08
Others	26.32	10.53	63.16	0.00	0.00
Rape	13.08	13.08	73.83	0.00	0.00
Robbery	8.00	8.00	84.00	0.00	0.00
Theft	17.58	4.40	78.02	0.00	0.00
Pearson chi2(24) = 390.8232 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...understand how another person is feeling?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	0.00	25.00	75.00
Arson/Public Disorder	8.33	33.33	25.00	33.33	0.00
Murder	21.08	45.41	31.89	1.08	0.54

Continued.....

Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Others	0.00	42.11	57.89	0.00	0.00
Rape	8.41	28.04	63.55	0.00	0.00
Robbery	8.00	20.00	72.00	0.00	0.00
Theft	9.89	40.66	49.45	0.00	0.00
Pearson chi2(24) = 387.1047 Pr = 0.000					
How often do you watch (on the Internet/TV/games/mobile phone/DVD) people...who stand up for someone?					
Crimes Category	Never (%)	Hardly Ever (%)	Sometimes (%)	Often (%)	Very Often (%)
Arms Act	0.00	0.00	0.00	25.00	75.00
Arson/Public Disorder	8.33	33.33	25.00	33.33	0.00
Murder	26.49	39.46	31.35	2.16	0.54
Others	5.26	36.84	57.89	0.00	0.00
Rape	8.41	28.04	63.55	0.00	0.00
Robbery	20.00	8.00	68.00	4.00	0.00
Theft	1.10	46.15	52.75	0.00	0.00
Pearson chi2(24) = 380.2973 Pr = 0.000					

Source: Calculated by Researcher based on interviews of Delinquent Juveniles.

charges reported watching such media content frequently (25%) and consistently (50%). Whereas 41.67% of juveniles with arson/public disorder reported never watching such media content, 16.67 % reported hardly ever watching, and 25% reported occasionally watching such media content. Whereas juveniles with murder charges watch such media content occasionally (63.78%) frequently (7.57%) and rarely (12.43%). Whereas more than 50% of juveniles with charges of rape, robbery, theft, and others had reported watching such media content occasionally. A statistically significant

association (Pearson Chi-Square = 203.6366 Pr = 0.000) was reported between the crime categories and this type of media consumption.

In response to the second question concerning watching people who are willing to do something for someone else, juveniles with Arms Act charges watch such content frequently (25%) and very frequently (75%). Juveniles with arson/public disorder charges watch this content rarely (41.67%) and never (16.67%). Juveniles with charges of murder, rape, robbery, theft, and others had reported watching such content



occasionally (more than 60%) and juveniles ranging from 4% to 16.67% across these crime heads never watched such content. Further Pearson association was reported significant (Pearson Chi-Square = 393.9934, $Pr = 0.000$) between the crime category and this type of social media consumption. The third question in the prosocial questions asked about watching people in love on different social media platforms. Juveniles with Arms Act reported similar to the previous question. Whereas juveniles with other 6 types of charges reported never watching such content in the range of 8% (Robbery) to 26.32% (others), rarely in the range of 4.40 % (Theft) to 47.03% (Murder), and occasionally in the range of 16.67% (Arson/Public disorder) to 84% (Robbery). The Pearson chi-square with a value of 390.8232 ($p < 0.05$) shows that significant association between crime categories and frequency of exposure to this type of media content.

In response to the fourth question regarding juveniles watching people understand what another person is feeling, juveniles with Arms Act charges reported highest in the category of rarely (33.33%), frequently (33.33%), and occasionally (25%). Juveniles with charges of murder, others, and theft reported rarely watching such content with a frequency of more than 40%. The highest responses of juveniles with rape and robbery charges had reported watching occasionally such content with a frequency of more than 60%. The Pearson Chi-Square with a value of 387.10 ($p < 0.05$) shows that significant association between crime categories and frequency of exposure to this type of media content.

The fifth question asked juveniles about watching people who take a stand for someone.

Juveniles with Arms Act, arson/public disorder, and murder had similar responses to that of the previous question. Juveniles with charges of rape reported watching such content occasionally (63.55%), rarely (28.04%) and never (8.41%). Juveniles with charges of robbery reported watching such content occasionally (68%) and never (20%). Juveniles with theft charges reported watching such content occasionally (52.75%), rarely (46.15%), and never (1.10%). The Pearson Chi-Square with a value of 380.29 ($p < 0.05$) shows that significant association between crime categories and frequency of exposure to this type of media content.

Table 6 provides a comprehensive summary of the results of the ANOVA test. In this test entire juvenile population was taken. The R-squared values show how well the independent variables (Independent factors) explain the variability in the dependent variables (the outcome). In this case, R-squared is 0.2421, which means that the model explains a 24.21% variance in the dependent variables. This is a measure of the model's accuracy, and it tells us how close the predicted values are to the actual values. In this case, it's 1.48529. This is a modified version of the R-squared value that adjusts with the number of independent variables in the model. It's 0.185 in this case. Overall, model F-statistics is 4.24 at p-value (0.000), indicating the model is statistically significant. Therefore, the ANOVA results suggest that the model is a statistically significant source of variation in Total Prosocial Score and Total Antisocial Score among the different crime heads. However, the Total Antisocial Score is less significant as compared to the Total Prosocial Score.

No of Observation = 443			R-Squared = 0.2421		
Root MSE = 1.48529			Adj R-squared = 0.185		
Source	Partial SS	df	MS	F	Prob>F
Model	289.70135	31	9.3452047	4.24	0.000

Table 6: ANOVA results of Association between type of Crime and Media Consumption Score

Total Antisocial Score	56.650267	16	3.5406417	1.6	0.0642
Total Prosocial Score	228.72517	15	15.248344	6.91	0.000
Residual	906.69595	411	2.2060729		
Total	1196.3973	442	2.7067812		

Source: Calculated by Researcher based on interviews of Delinquent Juveniles.

Table 7 reports the findings of ANOVA analysis that examines the relationship between heinous crimes and scores representing media consumption. This analysis involves all the delinquent juveniles taken in the study. This F-statistic for the model is 2.8 at p less than 0.01, showing it is significant enough to predict the association. The total Anti-social media consumption score significantly contributes to the overall model with an F-statistics of 2.41 and

a p-value of 0.0018. Similarly, the Total Prosocial media consumption score significantly contributes with an F-statistic of 3.08 and $p < 0.05$. The results indicate that there is a significant association between heinous crimes and media score consumption. These findings are crucial for understanding the relationship between heinous criminal behavior and media consumption patterns.

Table 7: ANOVA results of Association between Heinous Crime and Media Consumption Score

No of Observation = 443			R-Squared = 0.1743		
Root MSE = 0.4256			Adj R-squared = 0.112		
Source	Partial SS	df	MS	F	Prob>F
Model	15.715762	31	0.50696006	2.8	0.000
Total Antisocial Score	6.9854408	16	0.43659005	2.41	0.0018
Total Prosocial Score	8.3560188	15	0.55706792	3.08	0.0001
Residual	74.446766	411	0.18113568		
Total	90.162528	442	0.20398762		

Source: Calculated by Researcher based on interviews of Delinquent Juveniles.


Table 8: ANOVA results of the Association between Violent Crime and Media Consumption Score

No of Observation = 443			R-Squared = 0.1902		
Root MSE = 0.442843			Adj R-squared = 0.1291		
Source	Partial SS	df	MS	F	Prob>F
Model	18.929372	31	0.6106249		
Total Antisocial Score	7.3952881	16	0.46220551	3.11	0.000
Total Prosocial Score	11.144303	15	0.74295352	2.36	0.0023
Residual	80.601102	411	0.19610974	3.79	0.000
Total	99.530474	442	0.22518207		

Source: Calculated by Researcher based on interviews of Delinquent Juveniles.

Table 8 presents the results of the association between violent crime and media consumption score. 19.02% of the variance in the violent crimes is explained by the social media score variables (Total Antisocial Score and Total Prosocial Score) in the model. Overall, the ANOVA results suggest that the model, as well as the Total Antisocial Score and Total Pro-social Score, are statistically significant in explaining the variability in Violent/Non-Violent crimes.

Conclusion

The current study discusses about role of social media consumption on juvenile delinquency and provides strong evidence of the power of antisocial media consumption such as violent movies and games on the lives of delinquent juveniles. The media content over different social platforms motivates adults and further influences the cognitive, emotional, and relational development of children during adolescence.

The desire for fame among delinquent juveniles has emerged as a driving force behind juvenile delinquency, elucidating a complex interplay between cinematic influence, personal motivations, and the quest for recognition. Virtual reality allures juveniles and surpasses

reality providing an escape from the intricacies of everyday life. Parents and educators should be vigilant of the usage of screens by their children without losing social and relational engagements.

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Effect of Yoga on self-rated Sleep of Hypertensive Personnel in India's Central Industrial Security Force



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Abstract

The Central Industrial Security Force (CISF) personnel, responsible for securing India's critical infrastructures, face multiple stressors leading to potential hypertension risks and sleep disturbances. This research aims to assess yoga's efficacy, a holistic mind-body exercise, in improving sleep quality among Hypertensive Personnel in CISF.

Keywords: Yoga, Global Sleep Score, Subjective Sleep Quality, Hypertensive, security personnel

Background

Introduction

The Central Industrial Security Force (CISF) is a premier multi-skilled security agency of India, established in 1969 directly under the Union Ministry of Home Affairs. CISF personnel, tasked with safeguarding some of India's most critical infrastructures, often find themselves in a work environment that's rife with potential triggers for hypertension or high blood pressure. Their immense responsibility, combined with long, irregular working hours, can be a significant

source of chronic stress, a recognized factor for hypertension (Rosenthal & Alter, 2012). Further, the physical strain of the job, which often demands continuous vigilance and extended periods of standing can contribute to elevated blood pressure. Personal habits, like smoking (Lakier, 1992) or excessive alcohol consumption (Jung et al., 2020), common in many sections of the general population, further exacerbate the risk. Moreover, the nature of their job might lead to prolonged periods away from family, causing feelings of isolation, which can be an additional stressor (Hawkey et al., 2010). In essence, a

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multitude of environmental, physical, and psychological factors converge in the lives of CISF personnel, potentially heightening the risk of hypertension. Furthermore, CISF personnel face disrupted sleep patterns due to shift work and high-stress roles, potentially predisposing them to hypertension and emotional challenges in remote postings (Manohar et al., 2017).

The meta-analysis indicated that exercise, notably mind-body exercises, significantly enhanced sleep quality in adults (Xie et al., 2021). Yoga, originating from ancient India, stands out as a holistic mind-body exercise that intertwines physical postures (asanas), breathing techniques (pranayama), and meditation (dhyana) to harmonize the psycho-spiritual homeostasis. The link between yoga and improved sleep quality has been a focal point of numerous scientific studies. Yoga interventions have consistently shown improvements in sleep quality and reduced stress across various professions, from nurses (Fang & Li, 2015; Parajuli et al., 2021) and teachers (Metri et al., 2023) to military and security personnel (Telles et al., 2018; Telles et al., 2019). Further, multiple studies validate yoga's efficacy in managing hypertension and its potential as a complementary treatment (Cramer, 2016; Tyagi & Cohen, 2014; Khandekar et al., 2021; Hagins et al., 2013).

In the evolving field of non-pharmacological interventions for hypertension and sleep disturbances, the potential of yoga has been gaining considerable attention. The aim of this research was to evaluate the effect of a structured yoga intervention on the sleep quality of CISF personnel diagnosed with hypertension.

Methods

This study employed a two-group pre-post design involving 88 male Central Industrial Security Force (CISF) personnel from the Indian Space Research Organisation (ISRO), Bangalore, aged 25 to 60 years. Participants were equally divided into Control and Yoga groups. The Yoga group underwent a 3-month intervention, receiving one-hour sessions, five days a week, encompassing Loosening, breathing practices, Asanas, Pranayama, and Relaxation techniques. Sleep quality was assessed using The Pittsburgh Sleep Quality Index (PSQI).

The study was a two group pre-post design, focused on Central Industrial Security Force (CISF) personnel from the Indian Space Research Organisation (ISRO), Bangalore, aimed to evaluate the influence of yoga on hypertension in male participants aged between 25 to 60 years. Out of the 88 male participants, they were evenly divided into two groups: Control and Yoga, each consisting of 44 individuals. Participants had hypertension for over a year; 40.91% in the Control group and 47.73% in the Yoga group were on medication. The Control group's average age was 44.91 ± 10.52 years, while the Yoga group averaged 51.82 ± 7.56 years. Furthermore, the Control group's average systolic and diastolic blood pressure was 140.36 ± 6.86 and 90.11 ± 4.02 , while the Yoga group's was 144.41 ± 7.85 and 92.34 ± 5.48 . However, individuals with psychiatric conditions, recent surgeries, cardiac complications, or diabetes were excluded from participation. All methodologies and procedures were ethically approved to ensure the safety and integrity of the research.



Intervention

The yoga intervention designed specifically for hypertension incorporates a comprehensive range of activities, each tailored to cater to various aspects of physical and mental health. The program starts with loosening practices like slow jogging, and side bending. Following this, there are specific breathing practices introduced. These include hands in and out breathing, ankle stretch breathing, straight leg raising breathing, and lumbar stretch breathing. Asanas, or physical postures, are an integral component of this intervention. There are four categories: standing, sitting, supine, and prone. Certainly, here's the paragraph with the Sanskrit yoga pose names replaced with their English counterparts: The standing poses include Half Spinal Twist, Half Wheel Pose, Triangle Pose, and Tree Pose. Sitting postures are Twisted Pose, Half Headstand, Camel Pose, and Thunderbolt Pose. The supine category comprises Bridge Pose, folded leg lumbar stretch, Corpse Pose, and Wind-Relieving Pose. The prone postures include Cobra Pose, Locust Pose, Bow Pose, and Crocodile Pose. To further enhance relaxation, three relaxation techniques are incorporated. These are the quick relaxation technique, deep relaxation technique, and guided relaxation. Pranayama, which deals with the regulation of breath, is another vital component. The techniques taught include Alternate Nostril Breathing, Victorious Breath, Easy Breath, Alternate Nostril Breathing, Bee Breath, and left nostril breathing. Concluding the intervention is meditation, with "OM meditation" and "Resonance/sonorous meditation" being the core practices. Intervention spanned 3 months, with

one-hour sessions provided daily for 5 days each week.

Assessment

The Pittsburgh Sleep Quality Index (PSQI) is a widely recognized 19-item self-reported tool specifically crafted to gauge an individual's sleep quality and associated patterns over the previous month. Encompassing seven pivotal domains, the PSQI provides a comprehensive insight into various facets of sleep, including subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, utilization of sleep medications, and daytime dysfunction due to sleepiness. Each domain is systematically rated on a scale of 0 to 3. The cumulative score, referred to as the global subjective sleep quality score, can range from 0 to 21, with ascending scores denoting deteriorating sleep quality and heightened sleep disorders. Importantly, a threshold score of 5 serves as a clinical indicator of notably poor sleep quality, while scores exceeding 10 suggest chronic sleep challenges (Buysse et al, 1989).

Data Analysis

The data compilation and subsequent analyses were conducted utilizing the JASP statistical software. For evaluating differences in the PSQI and its constituent seven domains both prior to and following the intervention, the Mann-Whitney U test was employed to facilitate a between-group comparison (Yoga and Control groups). Additionally, a between-group analysis was carried out to identify alterations over the two distinct time points (pre-intervention and post-intervention).

Results

Table 1: Between-group comparison of PSQI and its seven domains before and after the study			
	Group	Time	
		Before	After
Global Sleep Score	Yoga	4.32±1.25	3.05±0.94
	Control	3.82±1.21	3.91±1.34
	P value*	p > 0.05	p < .001
Subjective Sleep Quality	Yoga	0.86±0.41	0.25±0.44
	Control	1±0.22	1.07±0.4
	P value*	p > 0.05	p < .001
Sleep Latency	Yoga	1.14±0.63	0.89±0.44
	Control	0.77±0.52	0.82±0.62
	P value*	p = .006	p = .36
Sleep Duration	Yoga	1.11±0.39	1±0.22
	Control	1.02±0.26	1.02±0.26
	P value*	p = .25	p = .66
Habitual Sleep Efficiency	Yoga	0.16±0.43	0.09±0.29
	Control	0.23±0.48	0.2±0.41
	P value*	p = .41	p = .14
Sleep Disturbance	Yoga	1.05±0.37	0.82±0.39
	Control	0.8±0.41	0.8±0.41
	P value*	p = 0.004	p = 0.79
Day time Dysfunction	Yoga	0.73±0.69	0.45±0.55
	Control	0.23±0.42	0.27±0.45
	P value*	p < .001	p = 0.11
* Mann-Whitney U test			

In our comprehensive evaluation of the effects of yoga intervention on sleep quality, several key findings emerged.



Global PSQI Scores

Before the yoga intervention, both groups reported similar sleep quality as indicated by the mean Global PSQI Scores: control group ($M=3.82$, $SD=1.21$) and yoga group ($M=4.32$, $SD=1.25$). No significant difference was noted between the groups ($U = 740.00$, $p > 0.05$), with a small effect size ($r = -0.24$). However, post-intervention, the yoga group demonstrated significantly improved sleep quality with a reduced mean score ($M=3.05$, $SD=0.94$) compared to the control group ($M=3.91$, $SD=1.34$; $U = 1352.50$, $p < .001$). The moderate effect size ($r = 0.40$) emphasized the potential benefits of yoga on overall sleep quality.

Subjective Sleep Quality

There was no initial difference between the control ($M=1.00$, $SD=0.22$) and the yoga group ($M=0.86$, $SD=0.41$; $U = 1097.00$, $p > 0.05$) regarding subjective sleep quality. However, a significant improvement post-intervention was observed in the yoga group ($M=0.25$, $SD=0.44$) compared to the control group ($M=1.07$, $SD=0.40$; $U = 1688.50$, $p < .001$). This substantial effect ($r = 0.74$) highlighted the positive impact of yoga on perceived sleep quality.

Sleep Latency

Initially, the yoga group took longer to fall asleep as reflected by higher sleep latency scores ($M=1.14$, $SD=0.63$) than the control group ($M=0.77$, $SD=0.52$; $U = 692.00$, $p = .00563$). Post-intervention, sleep latency times between the groups were found to be comparable, suggesting that yoga practices might contribute to normalized sleep onset times.

Sleep Duration

No significant difference was observed between the yoga and control groups regarding sleep duration either before ($U = 903.00$, $p = .25$) or after the intervention ($U = 989.50$, $p = .66$). This suggests that while yoga might influence various aspects of

sleep quality, it may not notably alter sleep duration.

Habitual Sleep Efficiency

There were no significant differences between the groups in habitual sleep efficiency scores both before ($U = 1032.50$, $p = .41$) and after the intervention ($U = 1078.00$, $p = .14$), though post-intervention scores hinted at potentially better sleep quality in the yoga group.

Sleep Disturbance

A significant difference was observed initially, with the yoga group reporting more sleep disturbances than the control group ($U = 744.00$, $p = 0.00432$). Post-intervention, the scores between the two groups converged, implying that yoga might reduce sleep disturbances.

Daytime Dysfunction

Prior to the intervention, daytime dysfunction was more pronounced in the yoga group compared to the control group ($U = 574.00$, $p < .001$). After practicing yoga, the daytime dysfunction scores in the yoga group trended closer to the control group, although the change was not statistically significant.

Discussion

The present study sought to elucidate the impact of yoga interventions on sleep quality as measured by the PSQI on Hypertensive Personnel in India's Central Industrial Security Force. Our findings underscore a promising potential for yoga as a therapeutic modality in improving sleep quality, particularly in domains of global sleep quality and subjective sleep quality the indication of enhanced overall sleep health. Prior to the yoga intervention, differences in sleep latency suggested that the yoga group initially took longer to fall asleep compared to the control

group. Post-intervention, however, these disparities appeared to diminish, suggesting the potential of yoga practices in regulating sleep onset. In terms of sleep duration, both groups showed no significant disparities both before and after the intervention, indicating that while yoga might influence the quality of sleep, it might not necessarily extend its duration. Furthermore, while there was no statistically significant difference in habitual sleep efficiency scores before and after the intervention, there was a trend toward better sleep efficiency in the yoga group post-intervention. This insinuates that with a larger sample size or a more extended intervention period, discernible effects might emerge. Disturbances in sleep were more pronounced in the yoga group at the study's onset, yet post-intervention scores suggest a trend towards normalization. This is particularly noteworthy, as it hints at yoga's potential in ameliorating sleep disruptions. Similarly, daytime dysfunction, which was initially more evident in the yoga group, showed a trend toward improvement post-intervention, although this did not reach statistical significance.

Our findings resonate with a growing body of literature that emphasizes the efficacy of yoga in promoting sleep quality, especially among professionals prone to high levels of stress and unconventional work schedules. For instance, Fang & Li (2015) observed marked improvements in sleep quality among nurses, who routinely face high-stress scenarios. Similarly, Metri et al. (2023) identified a significant enhancement in sleep quality among female teachers suffering from chronic musculoskeletal pain following workplace yoga interventions. This congruence is further fortified by the findings of Parajuli et al. (2021), who reported notable alleviations in perceived stress and enhanced sleep quality among nursing professionals after integrating a yoga regimen. Furthermore, the benefits of yoga are not restricted

to civilian professions. Telles et al., in two separate studies (2018 & 2019), underscored how yoga can significantly improve vigilance, self-rated sleep, and ameliorate anxiety among security personnel, including those in the military and Border Security Force. These prior investigations, in tandem with our current results, strengthen the assertion that yoga is a versatile and effective intervention for enhancing sleep quality across diverse professional groups.

One of the key strengths of this study is controlled comparison and PSQI, a widely recognized and validated tool. The study's limited sample size and short intervention period may restrict generalizability and full observation of sleep domain changes. Future studies should expand sample diversity, extend intervention durations, explore varied yoga types, and integrate physiological measurements for a holistic understanding of yoga's impact on sleep.

Post-intervention, the Yoga group revealed a marked improvement in Global PSQI Scores ($p < .001$) and subjective sleep quality ($p < .001$). Initially, sleep latency was longer in the Yoga group, but post-intervention differences between groups diminished. While there were no significant changes in sleep duration or habitual sleep efficiency, the Yoga group displayed reduced sleep disturbances post-intervention. Daytime dysfunction was initially more pronounced in the Yoga group ($p < .001$), but post-intervention differences were not statistically significant.

Conclusion

The present study provides compelling evidence that a structured yoga intervention can play a pivotal role in improving various aspects of sleep quality in hypertensive CISF personnel. The yoga participants displayed marked enhancements in their sleep patterns, emphasizing yoga's value as a non-pharmacological intervention for sleep



disturbances. Future research endeavors should further explore this therapeutic avenue.

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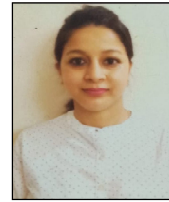
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Making and Un-making 'Homes': A Study of Former Women Prisoner's Ideas and Experiences of Home

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Abstract

The paper seeks to explore the processes by which former women prisoners make and un-make homes. For Indian women, the process of making and unmaking a home is not uncommon, yet for the former prisoners it is complex and layered, as shame and stigma of being a former women prisoner is an added prefix to their social identities. The paper with the help of in-depth interviews with eleven former women prisoners seeks to explore the complexities and challenges that these women experience and their ways of manoeuvring while creating a home.

Keywords: Making, Un-making, Homes, Former Women Prisoners, Ideas and Experiences.

Introduction

The paper investigates the ideas and processes of home of former women prisoners. The common idea of home is embedded in the social fabric of Kinship, which is legitimised through the consanguineous or affinal ties. In this sense, home is a mundane space of family relationships which is established either through consanguineous or affinal kins. Domash (1998) claims that though the home is often thought of as the most mundane of spaces, it is also most profoundly felt. It, she suggests, in all its banality and complexity, ties people to those spaces that they call home. Further,

such spaces are turned into sites in which people's geographies are made and remade. Through this paper, we unpack the seeming banality of the former women prisoner's lives to the spaces which they accord as their homes. For women in the Indian context, making and unmaking home is always on the go, as after marriage they relocate from their natal to their nuptial homes. Also in the Indian context, home is unproblematically associated with femaleness, both with the women who are expected to maintain hearth and home and with presumed feminine principles of boundness, physicality and nurturance (Wardhaugh, 1999). But for the women

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prisoners, this association is even more complex and layered, as in the first instance along with natal and nuptial home, they relocate to prison and while they are at the prison they are away from the very expectations of their domestic duties of the home. So the idea they conceive of home in between the shifting process of location and relocation is what this article shall try to project. The ongoing feminist critique of the home which understands women to have a particular and problematic relationship with the idea and experience of home will be taken into account, while articulating the former women prisoner's idea of home. There is a substantial gap in the qualitative prison literature in the State of Assam. This paper with its qualitative analysis will add to the existing literature on prison and is unique and one of its kind.

To describe women prisoners, they constitute a less-than-common subject in Indian academia and research, while male counterparts fare marginally better. Their normal visibility and customary disregard are reinforced by the low female population among prisoners. In 2021, out of a total of 5,54,034 prisoners, only 22918 or a mere 4% were women, while men accounted for 5,31,025 or an overwhelming of 96%. (NCRB, 2021). In addition, the cloak of invisibility that envelops women is configured from popular imagination as figures of intrigue, which remains shielded from view by male prisoners, partners in their lives and crimes (Bandyopadhyay and Mehta, 2022). We endeavour to move forward these tropes and develop perspectives on home, based on the ideas and experiences of former women prisoners as already mentioned above with due respect to their lives before, during, and after release from prison which has been considered equally embodied and corporeal as their prison term (Moran, 2012).

For this article, it is the dynamic and evolving sense of home contained in Gurney's (1999) work that is of interest. In his attempt to engage with the ongoing

processes of home, he evokes the idea of episodes that contain within them instances of experience, relations and emotions related to home. Giddens (1984, 1982) conceptualized home in the essence of a locale, and defined it as 'simultaneously and indivisibly a spatial and a social unit of interaction and the physical setting through which basic forms of social institutions are constituted and reproduced'. As Karjalainen (1993, 71), suggests in this line, "House is a material object, but home is a relation...home is an emotionally based and meaningful relationship between dwellers and the dwelling places". In her essay, 'Home', Morrison (2010) narrates her search for authority-the ability to narrate her own existence and to be sovereign. Feminist literature (Irigary, 1992; Martin & Mohanty, 1986; Ruddick, 1989) on home has emphasized the ways in which women's relationship to home is a process of emotional engagement and personal expression that can contain moments of subjugation but also means of resistance and reinvention. Homes are therefore conceived of as a socio-spatial means through which individuals may find a sense of orientation and meaning. This works on a variety of scales, pervasive relations that are often thought of as lying beyond the home. Thus the homes that people make can be understood to hold an important emotional resonance for both individuals and communities: a resonance that moves beyond the idea of home as simply a practical organization of space. The house may be the space of living, but the home is an expression of meaning that individuals make of many relationships that they have within and outside their homes. With this background, we shall try to locate the former women prisoners understanding of home to the prevailing literature on home.

Methodology

The choice of personal narrative as a means of collecting data for this paper was very much informed by the metaphor of narrative evoked by



Mblinyi (1989). She in her discussion of collecting personal narratives suggests that the stories in her research are ones in which individuals can tell both of that which is personal and private while also speaking of that which is public and pervasive. Somers (1994) argues for an evoking of narrative in research methodology and method, suggesting that it offers the possibility of engaging with the way that lives are storied. In order to collect narratives, we carried out repeat in-depth interviews with eleven women. The information on the former women prisoners was collected from two central prisons in upper Assam. Though the prison authorities provided a list of 17 released prisoners, we could reach out to only eleven of them, as some of the addresses were incorrect and others had moved away to different places. Ethical issues in terms of privacy and confidentiality have been strictly maintained throughout the research process and the participation of the informants. Their participation was purely voluntary. The name of the informants has been changed to pseudo-names to preserve their privacy. Our fieldwork projected to be completed between November 2020 to March 2021, was delayed and extended by Covid19 restrictions. In-depth interviews supplemented by informal conversations were conducted in mutually convenient places such as the informants homes or in public places. The conversations were mostly conducted in Assamese and Hindi and later transcribed into English. Though we attempted to take notes as the women spoke but realized that it hindered the flow of conversation or even made the women uncomfortable. The women were generally more comfortable conversing without their responses being written down as they spoke. Therefore to ensure that there was no interruption in the conversation, we would summarize their responses in short in the field notes. Immediately after the conversation, we would write down their complete answers, based on the summary.

The Ideas of 'Home'

Building on the arguments on the home so far, here we present the informants idea of home and how they conceive the idea of home as a personal and emotional process- both material and symbolic that constitute and are contained within the home spaces. Intertwining Meena, Avantika, and Hafida's experiences of the home which is one of frustration, limitation and discord. Meena, a 42 year old woman, who stayed for fourteen years in prison said:

"My childhood went in locating and relocating to different relative's houses after my mother's death, where at different times I faced neglect, abuse and burden in the different homes in which I grew up". She only expected that marriage would give her the dream home. But to her utter dismay, a few months into her marriage she found out her husband had an illicit affair. The discovery led to untenable torture from her husband, which finally pushed Meena into killing her husband and his lover. Against the norm of equating 'home' or 'inside' with security, the different homes in which Meena grew, up brought her insecurity, uncertainty, and disorder. For Meena, the murder of her husband had served to erase all the dark experiences of failing, neglect, and distrust in the institution of marriage and in her pre-marital and nuptial home.

Avantika, aged 24, who had stayed in prison for three years, belonged to a disturbed home, where she was forced into prostitution by her mother, to look after her brothers and sisters. She was now out on bail after being arrested for prostitution during a raid. She spoke candidly and at length about her life in prostitution.

"That life was mostly traumatic and violent. There was force, hurt, pain and inability to perform and that my life and identity were different from the other girls of my age... I was a prostitute, and I was made so by my own mother. But then a ray of hope came into life when I met Dutta Babu, he was not

like other clients, and with time we developed a subtle intimacy...I got in him the love and care that I was in search of, which I was devoid of in my home from my near and dear ones...he used to call me 'Pari', as he told me that meeting me brought light to his life, it partially made me feel free from my identity as a prostitute... That Pari within me was slowly growing. I imagined myself with the cocoon of his love and warmth for the rest of my life... but when that raid happened in the hotel where I used to work and my arrest shattered everything...I still long to meet Dutta Babu...But I don't know how and when..."

So, for Avantika, the meaning of home was connected with Dutta Babu's association. She said that her relationship with Dutta Babu gave her self-worth, and the moments spent with him, reassured her identity as a woman, freeing her from the image of a prostitute.

Another informant, Hafida, 39, spent 12 years in prison, on charge of killing her husband,

She narrated, "To me, home brings back only bad memories, a drunkard father, a helpless mother and an abusive husband...But I am forever grateful to my mother who taught me embroidery, sewing beautiful designs gives so much happiness and it gave me the strength to pass my days with the devil (meaning her husband) and the long years I spent in prison. I find freedom in doing embroidery, or else we women don't have freedom anywhere, we are born to serve others..."

In Hafida's experience, her natal and nuptial homes were spaces of control that encapsulated constraints of varying degrees and violence (Bandyopadhyay, 2022). While prison had its control system, but the absence of abuse and violence was a significant relief. She attached her personal space of freedom to a very minimalistic and artistic activity of embroidery, both before and after imprisonment. The ideas of home for Meena,

Avantika and Hafida reflect how one finds solace in a man, the other in a skill and the third in the idea of 'Home' as a haven. Their lives are far removed from the traditional home which is a haven in the heartless world with a rigid separation of the inside from the outside. Consequently, the norms of safety and security inside and fear and danger outside (Drake, 1994) do not fit the informants' understanding of home. Such an idea of home contributes to the interpretation of home as an expression of lived space, of human meaning and being in the world (Dovey, 1985; Heidegger, 1962; Young, 1997, 2005).

Finding Homes in Prison

The biography of many of the informants was structured by poverty, physical and emotional abuse, which in a way reflects the symbolic sanctions and confinements that occurred long before their imprisonment. For them, the world they saw both in and outside their home was marked by violence. Continuing with the thread of Meena's understanding of home, as a haven, for the informants whose pre-prison homes were sought with violence, to them prison privileged safety and security over the world outside, in that sense they associated home with the prison. In the words of the 32-year-old Riti, who had lived in prison for four years, said, "When I stayed there, at least I was away from the physical abuses which women like me often face". Riti, a widow belonged to a basti (slum) area, and her family sold local liquor, she said many a time before going to prison, she faced abuse at the hands of the customers, but she couldn't complain about doing so, they would lose customers, and over and above their business was also illegal. She did not associate the space of her home as safe and secure, but she attained that security in the prison. Regular access to food, without any payment, was another reason for some women to consider their lives in prison as privileged. Naima, aged 51, who stayed for a year



in the prison said,

"I was fed there without any cost, and now after release, I am struggling to feed myself...*muft mein Kaha khana denge hame koi?*"(who is going to feed me free of cost?).

For women like Riti and Naima, their implied association of prison with home was derived from the system itself. Prison, therefore, became a protector of their safety and security, a provider of their needs, and ensured survival without expecting anything in return. The concept of home in this context is further reinforced by fictive kin ties, for instance, a mother-daughter relationship or a sisterly bond is common in the female ward. Therefore, some informants talked at length about bonds that prisoners shared with each other that made their life easy and meaningful within the prison. 26-year-old Gauri, stayed for seven years in prison, recounted: .

"I met many good people in the prison, but among them, I developed the closest bond with Malati Jethai (Aunt). I found in her the love of a mother...she used to guide me in everything, it feels so good when someone has your back...now I feel her absence".

Gauri was a child born out of wedlock, when she was a year old her mother married another man, and never returned. Consequently, Gauri had no idea of a father, grew up with her grandmother, and from a very young age, earned her own bread as domestic help in different households. In prison, Malati's love filled her aching void. The informants also said meeting women with similar life trajectories, instilled in them courage and hope. Rui, 31, an informant expressed:

"My husband's brother and his wife were responsible for my husband's death over a land issue, but they framed me and I went to prison, I was so broken by my husband's death... that I couldn't raise much voice against my arrest...after

staying two and a half years in prison, seeing the other women there whose life stories were more pathetic than mine, I gained confidence...and I swear on the name of my dead husband that I will anyhow take my share of the property and send them to prison..."

The pre-prison experiences of the home of the informants made them creative in where and how they achieved a sense of home. Hooks (1991) provides us with a positive sense of home, which here is relatable to the prison. For her home is not a private, static, taken-for-granted entity, but something that represents the dynamic interchange between the inside and outside, private, public, individual and community. To quote Hooks:

"At times home is nowhere. At times one knows only extreme estrangement and alienation. Then home is no longer just one place. It is locations. Home is that place which enables and promotes varied and overhanging perspectives, a place where one discovers new ways of seeing reality, and frontiers of difference." (Bell Hooks, 1991, 148)

From Prison to the Homes and beyond

"Does my eight months in prison make me a lesser mother...?" with a blank face Maneka asked us. She narrated to us her life prior to imprisonment, her life was no less different from many other middle-class single mothers, who work hard day and night for a bright future of their children. Indeed she was successful in making her son an engineer and finally, he got a good job. Her life was almost perfect, she was looked upon as a successful mother by everyone, but due to huge mismanagement of cash, in the office where she worked, she was held accountable and arrested and sent to prison., She repeatedly told us that she was framed by a colleague, and her son could not accept the fact that his mother had become a prisoner. The worst part was that, her son neither visited her nor believed in her innocence. She laments how the episode of



prison, corroded her bond with her son, who was the sole reason of her living. She had to depend on the notoriously slow process of law without help from her son that could have secured her bail within a month. Borah (2021) mentions how legal aid lawyers in Assam act in a lackadaisical manner, therefore, many poor women prisoners awaiting bail, languish in prison for years. Even post bail, Maneka was still castigated and not allowed to bless her son during his wedding. Imprisonment corroded her identity from a mother to a bystander, penalized and tarnished for life for having been sent to prison for a crime she did not commit. She narrated to us the episode of her son's marriage which reflected her condition at home in the current times. She told us the following: "My sister-in-law was made the groom's mother. I was strictly asked by my son not to take part in the marriage, in my own home I was treated like a prisoner. I was inside my room though, could overhear my relatives saying rubbish about me. When my son was about to go to the bride's house for the marriage ritual at night, someone among the relatives said he should take his mother's blessing. But my sister-in-law insisted that a tarnished woman should not be touched or seen before starting out on an auspicious occasion". Rumi, another informant, 27 years old stayed for a year in prison on charge of stealing from the store where she worked and was now out on bail. She expressed ambivalent feelings in relation to the question of home after her release and expressed her sense of insecurity. Women are anyways more likely than men to perceive home as an emotional refuge or haven or source of protection (Altman & Werner, 1985). She said how her brother's friends who once used to respect her, treat her as their own sister, often come drunk to their house and make her feel uncomfortable.

"Give bad gaze...and speak rubbish, and when I complained about this to my brother, he says that I deserve it...I don't know how my brother became

like this, he was so protective of me before I went to prison, we were poor, but we were happy..."

She said her mother also doesn't say anything in this regard and represented the typical son-loving mother who doesn't say a word against them. She also said how her brother doesn't let her go out anywhere, except on her court dates and it was during the court dates that we met her and interviewed her. She covered her face completely with a dupatta with only her eyes visible, on being asked about it she said, "I feel ashamed to face people...." The greatest battle the women were fighting in the domestic spaces is the constant emotional struggle with social exclusion and isolation that is compounded by their incarceration. Incarceration often disrupted meanings associated with the private self as well as the public person. It was the elements of the stigma that got attached to their identity, which stood in the way of the successful reintegration of the women. Varying widely in exact definition, the concept of stigma generally conveys a sense of disgrace, based on an attribute viewed as discrediting, which reduces the bearer from a 'whole and usual person to a tainted and discounted one' (Goffman, 1963, 3). The most difficult part was that they faced the stigma in their own homes and it prevailed because in the popular imagination, women prisoners are considered extraordinary, grotesque, and demonic, who have not only broken the legal frame but have also transgressed several normative and moral boundaries of social life (Bandyopadhyay and Mehta, 2022).

Conclusion

At the outset of this article, we suggested that while seemingly mundane, the homes in which people live are amongst the most profound of spaces. By engaging with the idea that women associate with their homes, our aim was to unpack some of this profundity. Unpacking this profundity



reflected that 'Love', 'Security' 'Freedom' are the ideas with which the women associate home. Their notion of home is not bounded by the four walls of the domicile, instead extends into those parts of the physical life where one feels at home (Ramphele, 1993). Their association of homes was uncommon in the sense, finding a home in prison contradicts the dominant narrative from the prison on the flow that imprisonment is an extension of trauma, marginalization, and institutionalization. But in post-imprisonment life again the idea of home becomes shaky for the women, as their home again acts as extended arms of the prison where their narratives are about the dehumanization of identity and personhood supplemented with stigma and shame. Trouble in the domestic spaces of the home occurs for former women prisoners because mainstream society has a gendered understanding of criminals and prisons. Prisons are as yet the no-entry zones for women. As victims, women are accepted, but as offenders, they are denied. In a sense again, imprisonment transformed the idea of home again, for the women, who were in some way happy in their home spaces in their pre-prison lives. In particular, for the informants, the dialectics of home, the inside, and the outside are not hermetically sealed from each other but are intimately interconnected. In a way imprisonment helps in both making and unmaking homes for the informants as reflected through the article.

Summing up, for the former women prisoners, there is no clear binary divide between home and prison, between inside and outside, safety and danger, but rather a more individual and cyclical relation to each of these conditions. For the eleven informants the experience of home run on a cyclical basis, moving from degrees of relative insecurity and security to freedom and confinement, and so on (Fleisher, 1995; Hagen and McCarthy, 1997). To conclude perhaps there may be limitations to our study as qualitative study cannot be generalized

and data reported here represent the perceptions of the informants interviewed.

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The Problem of Human Trafficking : A Felonious Business of the Contemporary Age

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Abstract

Human trafficking, particularly of women and children has become an important and major concern in India. The proximity of the trafficker to the potential victim is a critical factor in trafficking. This paper focuses on Human trafficking in India. The vulnerable factors such as poverty, cultural and social factors, forced labour, trading of organs, prostitution and gender violence remain unseen. Human trafficking presents enormous challenges to governance and law enforcement, which can appear overwhelming at times. Even if it is unlikely to be eradicated, more effective steps can be taken to contain or even reduce the scope of the problem through a concerted effort to raise the priority of combating human trafficking and by exerting pressure on and improving capacity. This paper contends that such vulnerable factors should be stressed and analyzed in order to understand how trafficking impacts the victim physically and psychologically. Along with this, the paper also attempts to provide measures and services that can be provided to trafficked victims in the country.

Keywords: Human trafficking, trafficker, victim, vulnerable factors, measures.

Introduction

Human trafficking is the universal problem which can be described as the recruitment, movement, and concealment of individuals using various techniques such as deception, abduction and intimidation for the general motive of exploitation.

Men, women, and children of all age, gender and nationality are traded across and within intercontinental borders for abuse, forced prostitution, domestic help and in numerous industries including fishing, agriculture, and construction, as well as to commit criminal activities. It has replicated as the second major

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organized misconduct in India and the victims of trafficking are devoid of their basic human rights. The act of Human trafficking remains a huge problem, even though it is sternly prohibited by Indian law. People are regularly trafficked for marketable sexual exploitation and enforced or ambassadorial labour. According to the section 370 IPC, anyone who (a) recruits, (b) transports, (c) harbours, (d) moves, or (e) receives an individual or individuals for the purpose of exploiting by:

- i. using threats of harm,
- ii. using power, or
- iii. using any other form of intimidation
- iv. by abduction,
- v. by using deceptive conduct or abuse of authority, or
- vi. by incentive,

in order to obtain the consent of any person who has authority over the person who is being hired, shipped, harboured, moved, or received, including the providing or receipt of compensation or benefits, commits the crime of trafficking.

The Protocol to Stop, Suppress, and Penalise Trafficking in Persons, especially Women and Children, supplementing the *United Nations Convention Against Transnational Organised Crime* (the Protocol) sets the first uniform worldwide definition of "trafficking in persons." It is meant to prevent and combat such criminality, as well as to facilitate international cooperation to combat it. The Protocol also emphasises the issues linked with human trafficking, which frequently results in barbaric, demeaning, and fatal exploitation of trafficked persons. The Protocol, like the parent United Nations Convention against Transnational Organised Crime, 2000 (the Convention), is designed to standardise language,

regulations, and practises of countries in this area of the law.

The protocol includes several generic victim protection and support measures. These include a list of social support services such as counselling, educational opportunities, medical and psychological assistance, and the chance for victims to achieve legal status that allows them to remain in the receiving Party's country, either temporarily or permanently. Countries that ratify the Protocol would be obligated to cooperate with each other in identifying criminals and trafficking victims, sharing information about offenders' methods, and educating investigators, enforcement, and victim-support workers.

Parties would also be expected to put in place security and border restrictions in order to detect and prevent human trafficking. This involves strengthening their own border controls, requiring commercial carriers to check passports and visas, establishing standards governing the technical specifications of passports and other travel documents and working together to determine the validity of their own documents when used overseas. The Convention's established conference of the Parties will have similar functions under the Protocol to standardise terminology, laws, and practises of countries in this area of the law. The Protocol entered into force on 25 December 2003 (article 17).

Conferring to a report by Free a Girl Foundation (2021), around 700-800 children are stuck in the red-light zone of Nagpur, India. ***Rendering to another study conducted by Reuters***, out of an evaluated 20 million commercial prostitutes in India, 16 million women and girls are fatalities of sex trafficking. ***According to Legal Services in India***, every hour, four girls in India enter prostitution, three of them against their will. It has also been recorded that one-third of those responsible for human trafficking in approximately



200 cases in West Bengal and Andhra Pradesh are women.

According to the research report submitted by Shri S. Saratkumar Sharma, Chairperson of Manipur Commission for Protection of Child Rights, 2016, it was found that:

- a. The main reason for child trafficking in Manipur is the lack of proper school education, rather than poverty. Despite massive government investment, the government school education system is unable to maintain quality. It is quite regrettable that the infrastructure of government schools has remained mostly unchanged since their inception and is now regarded antiquated. However, in recent years, particularly in 2016, it has been discovered that the hunt for employment possibilities is also one of the primary drivers of child trafficking in Manipur.
- b. The mode of recruitment for child trafficking is mostly through local agents, who are almost always members of the community or from the same villages where the victim lives. The real or fake Christian missionaries play an important role in this process since the traffickers know that their targeted target groups are Christians. As a result, they are easily persuaded and their operations are secure. With the increasing number of trafficking incidents, the path for trafficking appears to be multiplied.
- c. Committees established under the JJ Act 2015, which is the principal statutory entity to combat and rehabilitate child trafficking victims, remain ineffective due to a variety of visible and invisible causes. For example, the state government has a practise of not releasing allowances to Chairpersons

and members of Child Welfare Committees and other fund components on time.

- d. According to the memorandum submitted to Smt. Maneka Gandhi, Union Minister of Women and Child Development, by the combined representation of the State CWCs on November 11, 2016, it normally takes twelve to eighteen months or more to discharge the money component of CWCs.

NCRB Report

Following the 2021 data of NCRB, in 2021 there were only 84.7 per cent charge sheets filed by the police of the 2,189 cases registered under the Anti-Human Trafficking Units (AHTUs) across the country in 2021, out of which merely 16 per cent of the cases witnessed convictions. Police in the year 2020 filed charge sheets in 85.2 per cent of the 1,714 cases of human trafficking which were registered. However, only 10.6 per cent cases witnessed convictions. Seven states reported no convictions while two reported a conviction rate of less than 2 per cent.

Who are the victims of Human Trafficking?

There is no single variety of victims of human trafficking. Men, women, transgender people, adults, children, legal permanent residents, and foreign nationals may all be victims of this crime. Even if they seem to accord, any individual under the age of eighteen (18) who executes commercial sex activities is a victim of human trafficking. This is true whether force, scam or intimidation is used. The most susceptible members of society are impacted by human trafficking in India. Those from lower social sections who are underprivileged, lack a stable family structure, and have nominal schooling are predominantly at danger. Men and boys are traded to execute forced labour, whereas women are commonly trafficked for the goals of sexual manipulation, prostitution, hospitality organisations particularly in regions with a tilted

gender ratio which can include roles such as servants, beggars, and labour-intensive scroungers. Women are forced to become domestic help and even forced into marriages. Nepalese and Bangladeshi women and girls are often tricked into getting deceptive jobs in India and ultimately end up in the vicious cycles of sex trade. Exploitation transpires of women and girls from Central Asia, Europe, and Africa for commercial sexual activities in Goa. Human trafficking in India occurs both internally and across borders. Rural youth, for example, may be lured by traffickers to join the city with "guarantees" of better jobs and greater wealth. Some may be forced to work in brothels or debt bondage (unpaid), or other positions of disgrace and exploitation. Undeniably, human trafficking robs children and adults of their prior sovereignty and livings, leaving them in circumstances of mortification, trauma and terror.

Objective

The objective of this paper is to study, analyze and understand the root causes of human trafficking in India and how this impacts the victims. Furthermore, the abovementioned paper also attempts to provide measures and services that can be provided to the trafficked victims in the country.

Research Methodology

The present paper is grounded on secondary facts, which has been taken from previous conducted researches, District Census Handbook, Statistical Abstract State wise and National Crime Record Bureau (NCRB). The data have been further collected and analysed to study the issues, causes and impact of trafficking on the victims.

Roots of Human Trafficking

- a. **Poverty** is the chief contributor to human trafficking. It can force people to become traffickers and can even coerce parents to sell their own children or other family members into captivity. Traffickers frequently aim poor people and offer them a way to earn money when, in fact, they will be treated as a slave. Poverty also plays a major role in many of the other root causes of trafficking.
- b. **Lack of education** can lead to reduced chances for work at a basic living wage as well as lack of understanding about an individual's basic right. Each factor leads to surge in helplessness to human trafficking.
- c. **Demand for cheap labour or Demand for cheap sex:** Demands for inexpensive labour and for commercialised sex offers prospects to traffickers for misusing and manipulating people. Traffickers often gain huge profit by providing facilities with help of cheap labour and then selling those facilities or goods at an increased price. Likewise, demand for commercialised sex makes the traffickers and pimps to gain revenue by selling their victims through a never-ending series of purchasers and higher prices.
- d. **Absence of Human Rights for helpless groups.** Most of these victims are those underprivileged in society who lack dignified human rights, making them helpless and defenceless to human trafficking. Traffickers often target these susceptible individuals of society since they are not secured by law enforcement, their family or even the society they live in. Furthermore, when countries lack basic human rights laws, traffickers assume that they can get away with their activities without consequences.
- e. **Individuals lacking legitimate economic opportunities** become more vulnerable to human trafficking. Migrants without work authorizations, or those who lack education,



or people residing in remote areas with less employment opportunities, as well as women and certain ethnic groups who may face prejudice, are especially prone in this area.

- f. **Cultural practises and societal variables** play an important part in human trafficking. In some areas, bonded labour is considered a suitable way of debt repayment. In some regions, selling children to traffickers is the standard practice, especially among poorer rural families. Cultural and socioeconomic factors may also avert victims from coming out about being trafficked or revealing their traffickers, predominantly if they belong from groups that lack human rights protections.
- g. **Conflicts and Natural Disaster** can cause financial uncertainty and a lack of respect for human rights, giving traffickers the advantage and increasing people's vulnerability to such circumstances. Some rebel or military groups will hold sex slaves and hire children as soldiers in war zones during conflicts. Natural disasters can also pressurise people to leave their hometowns and native nations, which increases their susceptibility to traffickers, especially if they are searching for employment or paying smugglers to get abroad. Similarly, with more economic unpredictability, traffickers have more probability to bait people into trafficking circumstances by making them fraudulent work offers.
- h. **Lack of safe migration options** for people who want to leave their home nations for reasons of safety or monetary opportunity are particularly vulnerable to traffickers. Traffickers may abuse smuggling which is illegal to bait victims into performing forced labour or engaging in sex trafficking. Moreover, when migrants are searching for employment abroad, traffickers often present

them with what appear to be legitimate occupations before coercing them into a situation where they are exposed to trafficking.]

- i. **Human Trafficking createing a huge amount of financial profit** is one of the major causes. This gives them the motivation to keep alluring victims into forced labour and sex trafficking. Forced labourers and bonded labourers provide cheap labour for traffickers, permitting them to charge more for their goods and services. For those who engage in sex trafficking, it is simple to pocket the entire profit by making women work for a certain amount each night and keeping them there using drugs, physical abuse, violence, coercion and other strategies.
- j. **Humans are also trafficked to fulfil illegal demands of organs.** Existing prevalence of black markets and unregulated labour markets enable the exploitative practices to flourish.

Human Trafficking: How it Happens?

Usually, a perpetrator or trafficker seeks a weakness within a victim that can be abused. This can occur either in-person or online. The act of human trafficking basically comprises of the following basic steps:

- a. **Luring** - establishing a connection, in person or online, with the intent of developing a relationship for future exploitation.
- b. **Grooming** - to prepare someone for a particular objective.
- c. **Isolation** from loved ones or family
- d. **Manipulation and coercion**
- e. **Exploitation.**

Common methods of recruitment include the fake promises of meeting the need of food, clothing, shelter, etc. In some cases, the victims are lured by promises of love, romance, acceptance, Offers of independence, luxury items, monetary gains, promises of better employment or better opportunities and other forms of flattery, lies and manipulation. Some victims are sold by family members, friends or a family friend. Sometimes traffickers also use advertisements in which they offer work opportunities i.e. fake jobs with little or no negative aspects. Traffickers also sometimes ensure dependency by facilitating the victims' addiction to drugs, or by providing monetary support to establish debt bondage. Traffickers typically create debts that are impossible to repay through interests or additional fees which can lead to an eventual state of complete hopelessness in victims.

Legal Provisions Related to Trafficking in India

- i. Under **Article 23 (1)**, Trafficking of Human Beings and other forms of forced labour is prohibited.
- ii. The primary legislation used to safeguard humans against trafficking for commercial sexual exploitation is the **Immoral Traffic (Prevention) Act of 1956 (ITPA)**.
- iii. **Sections 370 and 370A of the IPC are in lieu of Section 370 of the Criminal Law (Amendment) Act of 2013**, which provides comprehensive measures to counter the threat of human trafficking as well as the trafficking of children for exploitation or any form of sexual exploitation, captivity, enslavement or the forced removal of organs.
- iv. On November 14th 2012, the **Protection of Children from Sexual Offences (POCSO) Act** became operational which is a special law designed typically to safeguard children

from sexual abuse and exploitation. It provides elaborate and in-depth definitions of numerous variety of sexual abuse, which includes penetrative and non-penetrative sexual assault and sexual harassment.

- v. Several specific statutes have been implemented which contain precise regulations relating to trafficking in women and children such as **Prohibition of Child Marriage Act, 2006, Bonded Labour System (Abolition) Act, 1976, Child Labour (Prohibition and Regulation) Act, 1986, Transplantation of Human Organs Act, 1994**, which are distinct from existing sections in the **Indian Penal Code (IPC)**, i.e., Sections 372 and 373 which precisely deals with the marketing and procurement of girls for purpose of prostitution.
- vi. Explicit legislation to address the problem has also been approved by State Governments. For instance, The Punjab Prevention of Human Smuggling Act was passed in 2012 to specifically deal with the existing issue.

Impact of Trafficking on the Victim

Trafficking of human is a multifaceted and complicated problem since the victims experience both physical and psychological trauma as they seek and struggle for the basic requirements that involve shelter, food, financial issues, legal aid, social support, psychological treatment, etc.

Physical Effects

- The traffickers often practice violence to control and dominate the victims. Some of the common strategies used by them include starvation, thrashings, whippings, rape, gang rapes etc.
- Some of the people procuring sexual activities brutally act towards the victim and



harm them such as broken bones, concussions, burns and brain trauma.

- People who are the victims of commercial sex also experience health issues such as STDs (Sexually Transmitted Diseases), menstrual irregularities, miscarriages, forced abortions, drug or alcohol dependency and many such other complications.

Possible psychological effects of human trafficking

According to the World Health Organization, WHO, 2012, the psychological impact of victimization may be more severe than the physical violence. As contemplated, victims often experience a mixture of symptoms including the symptoms that originated before the experience, those that were a result of trafficking, and those experienced after release. Some common psychological disorders are:

- Anxiety and Panic disorders
- Depression
- PTSD (Post-Traumatic Stress Disorder)
- Substance use and disorders
- Shame and remorse, avoidance of activities and lack of interests
- Isolation and feelings of exclusion from social support
- Episodes of rage, remorse and self-blame
- Suicidal thoughts
- Struggles with identity and personality

Being a victim of trafficking, it is very common for the victim to develop mental health issues as the person may have experienced trauma/abuse, period of mistreatment, violence and limitations on movement while being trafficked. Along with this, larger number of unmet needs and a low level of

help and support following trafficking also impacts the victim in a very harsh way.

Reasons why victims do not ask for help

In these situations, the victims may take some time to ask for assistance. It may take some time for them to do so because the majority of trafficking victims first do not want to be identified and labelled as victims and some of them blame themselves for the tragic event.

Moreover, people who are trafficked mainly for sexual activities are misidentified as "willing" members of the sex trade, who are there out of will. In conclusion, victims may be unlikely to be aware of their exact location or sometimes may not be able to speak or comprehend and communicate in the language spoken locally. When victims seek out assistance, they encounter countless obstacles. The traffickers characteristically impose tight physical and emotional authority over them usually by:

- Seizing their identification documents, cash and communication devices.
- Prohibiting contact with family or friends.
- Keeping track and restricting movement.

Services that can be Provided to the Victims

- A complete psychiatric evaluation should be properly conducted and assessment should explore the vulnerability, manner of recruitment and exploitation experienced and throughout the process mental issues and substance use disorders should be addressed individually to reduce and manage signs of victimisation.
- Special attention should be paid to developing awareness and individual control over one's senses, thoughts and emotions, as well as actions and choices.



- By delivering non-judgemental support and encouragement, addressing and reducing personal shame, guilt and embarrassment.
- Providing appropriate instruction and increasing awareness regarding the nature and tactics of trafficking which are used to deceive and take advantage of others for monetary benefits and exploitation.
- Evaluating the victims' potential for suicide and if present, then providing appropriate intervention strategies to such affected individuals.
- Providing opportunities for training, raising public awareness, and granting access to tools and other forms of support that can be used to encourage alternative ways of life.
- Helping the victims to reconnect and rebuild a sense of personal as well as social individual worth and confidence in their perceptions, beliefs and thoughts.
- Providing personalized assistance and catering individual requirements of each victim.

Support from Non-caring professionals

- Educating one and becoming aware of the multifaceted psychological repercussions of trafficking on survivors.
- Assistance and encouragement should be offered to the survivors in order to access competent assistance, rehabilitation and therapy.
- Providing aid to the victims, which is free from personal biases and judgements of any sort.
- Gaining and creating awareness of available resources and services as well as assisting the victims in building social security and

encouragement to take access of necessary community assets.

- Since the process of transformation may be lengthy and unique to the individuals, it is essential to be gifted with compassion, kindness and patience.

Rehabilitation of Victims of Human Trafficking

- The government has created the "NALSA (Victims of Trafficking and Commercial Sexual Abuse) Scheme, 2015" to give legal assistance to victims of trafficking, encompassing women of all ages and at all stages: prevention, rescue and reintegration.
- The Ministry of Women and Child Development is implementing the 'Ujjawala' scheme across the country to prevent trafficking and to rescue, rehabilitate, reintegrate and repatriate victims of trafficking for commercial sexual exploitation. State governments are responsible for identifying districts that require immediate intervention to combat trafficking and for submitting proposals to the Central Government for funding, including under the Ujjawala Scheme. The scheme's objectives include, among other things:
 - i. Giving victims with immediate and long-term services for rehabilitation by providing basic amenities/needs such as shelter, food, clothing, medical treatment including counselling, legal aid and guidance and vocational training.
 - ii. Facilitating victims' reintegration into the family and society at large.
 - iii. A grant is provided under the scheme's 'Rehabilitation' component for the



establishment of Ujjawala Homes on rent, personnel, food, medical care, legal help, education and vocational training. A grant is provided under the 'Reintegration' component for the establishment of a Half-Way Home, seed money and follow-up visits.

- The State Governments/Union Territories (UTs) have notified their victim schemes for compensation in accordance with Section 357A of the Criminal Procedure Code (Cr.PC). Additionally, in order to assist and reinforce the State Compensation Schemes, the Ministry of Home Affairs disbursed Rs. 200 crores as a one-time grant to State Governments/UTs in 2016-17 through the Nirbhaya Fund's Central Victim Compensation Fund. The fund is used by states and territories to pay victims of various crimes, including human trafficking.

Indicators of a Potential Trafficking Situation

While everyone has the potential to identify a trafficking situation, the victims of trafficking are too afraid from the threats of traffickers that they may not be willing to accept assistance. However, the following mentioned key red flags/warning signs could indicate a possible case of a trafficking situation:

- Employees who reside in substandard housing alongside one another.
- A lot of people living in small areas in inhabitable conditions.
- The responses seem to be scripted and rehearsed.
- Lack of authentic documents, or employer holding their identity documents
- Person has physical branding like tattoos

- Signs of physical or sexual abuse
- Appears timid and submissive

Conclusion

Even though the Indian Constitution ensures equal rights of men and women and there are specific legal provisions for anti-human trafficking, however, when it comes to the practical implementation and execution of these mandates, they are seen to be lacking. Moreover, the victims of aftermath trafficking are not properly guided and taken care of, hence proper methods and services should be given to such impacted individuals. It is also seen that sometimes family does not even want to accept their trafficked member because of the social stigma, because of which these victims once again face trauma in life. So professional services should be guaranteed for victims. Moreover, awareness regarding human trafficking should be conducted since any crime that can be used as an occupation one day becomes a colossal evil and this is especially seen in the case of human trafficking.

UN officials, government leaders, mental health professionals, NGO workers, former victims should work collaboratively in forming an effective strategy to fight against the trafficking problem. The United Nations Global Initiative to Fight Human trafficking (UN.GIFT) is a community that was born out of a renewed commitment by world leaders in the battle against human trafficking to put this crime to an end. UN.GIFT is a call for action reminding the concerned officials, civil society actors, the media, and all other concerned individuals to come together with a common commitment to fight human trafficking. Fighting the battle against human trafficking is a sensitive issue and can only be resolved by joined efforts from every member of the society.

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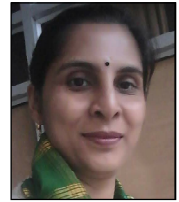
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A Study of Automatic Traffic Lights in Chandigarh

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Abstract

Rapid urban development resulted in increased volume of vehicular traffic in urban areas. It, therefore, necessitates regulating their movement to ensure road safety. This calls for installation of an efficient traffic control system. In the beginning of the 21st century, traffic lights began to gain currency and developed to be an integral part of traffic control system. Further, with the invention of computers, introduction of automatic traffic lights enhanced their efficacy. The present paper, thus, studied the perception of citizens and opinion of deputed traffic police personnel about working of automatic traffic lights in Chandigarh. For this purpose, primary data was collected by conducting a city-wide survey at traffic light signals located in various parts of the city. The citizens found the traffic lights to be highly useful. However, duration and timings of traffic lights needs to be modified in accordance with the flow of the traffic during the peak hours.

Introduction

Traffic lights are an integral part of modern traffic management. They are providing additional safety cover to vehicles and pedestrians on the road. The increase in vehicular traffic and a high degree of traffic congestion called for adopting a systematic way of preventing chaotic conditions on public roads. Traffic signals are one of the most important systems that play a crucial role in the movement of vehicular and pedestrian traffic. These devices are placed at important locations such as busy intersections to regulate the flow of traffic that

includes heavy commercial vehicles, cars, bicycles and pedestrians. A traffic light control system ensures safe movement for vehicles so as to help them avoid collisions with other vehicles and people. They ensure an orderly flow of vehicles by giving them the right of way, reducing road accidents and providing safety to pedestrian traffic.

Signal timing is highly imperative to regulate traffic and provide road safety to people. There are three main types of signal timings i.e. fixed timing, actuated timing, and coordinated timing. Fixed timing uses the same present time intervals that do

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not change in accordance with traffic volume. Actuated timing uses a detector that is able to adjust itself according to traffic volumes. Coordinated timing helps minimise starting and stopping at random which helps traffic flow and is less likely to create a traffic jam. Thus, traffic signals are the backbone of the systematic and orderly flow of traffic. There are mainly 6 types of signals i.e. Traffic Control Signals, Fixed time signals, Manually operated signals, Traffic actuated (automatic) signals, Pedestrian signals, and Special traffic signals. These different types of signals are adopted according to the requirement of traffic movement.

The present paper, thus, studies the performance of automatic traffic lights in order to create a system that caters to the current requirements of traffic management.

Traffic Lights : Retrospect

The increased mobility in urban areas at the end of the 20th century contributed towards increased vehicular traffic on urban streets and freeways. The streets and freeways in cities were conceived and constructed to ensure systematic and smooth movement of traffic in metropolitan cities. However, the growing dependence of people on private automobiles resulted in dangerous congestion due to large volumes of conflicting vehicular traffic. Consequently, it was realised that a more sophisticated system of traffic control and surveillance needed to be developed for the systematic management of urban transportation. The significance of technology for traffic control relates deeply with urban mobility, efficient utilisation of surface streets and freeways and implementation of effective technology to control traffic.

In 1868, John Peak Knight, a railway manager, initially adopted the signal system that was used in the railroads. Hence, traffic lights were invented in London in the late 1860s. At that time, trains were

stopped at night by using red gas light signals and green gas light signals were used during the daytime. Knight, thus, installed a similar gaslight semaphore system near London's Westminster Bridge in December 1868. However, in a tragic incident gas leaked from the signal lights and exploded on its police officer operator, within a month of its installation. Thus, it took 40 years for the US to design a standardised traffic light control system. In the early 1990s, the traffic lights with the semaphores design with moving arms were used. The moving arms were used to indicate the 'stop' and 'move' signals. These signals became highly popular in cities experiencing huge volume of traffic such as Chicago. The automatic traffic lights were first introduced in San Francisco with the red and green colour lights, as used by railways.

Traffic control systems, undoubtedly, relates to the technology of signal systems. With the advent of electricity, the idea of electric traffic lights became more prominent in 1912. In 1914, the first electric traffic light was installed in Cleveland. The early electric traffic lights contained only red and green lights. In place of yellow lights, a loud sound was used to alert drivers and pedestrians about the change of light (i.e. from red to green or green to red). However, irrespective of being electric lights, they needed to be operated manually to switch the colours. From 1920 onwards, automatic electric traffic lights were developed. These automatic traffic lights were timed to change after fixed intervals. In 1928, a flexible progressive pretime system was introduced. These pretime systems were quickly accepted and installed widespread. These automatic traffic lights succeeded because of their simplicity, reliability and were relatively economical. Hence, automatic traffic lights revolutionised the system of traffic control.

Furthermore, the inventions of computers led to the advancement in the development of automated traffic lights. From 1950 to 1970, analog and digital

computers were introduced in the field of traffic control and surveillance technology. Over the period, digital computers began to be largely used for traffic control and surveillance of urban streets and freeways. The use of countdown timers

provided greater opportunities to drivers to determine their safe movement according to the timings of lights. Table 1 presents the timeline of the development of traffic lights as traffic control system.

Table 1
History of Traffic Control Signals

S.No	Important dates	Description
1.	December 10, 1868	J.P. Knight, a British railway engineer, installed the first gas-lit traffic lights outside the Houses of Parliament in London
2.	1912	A traffic control mechanism was set up in Paris at the Rue Montmartre and Grande Boulevard. At the top of the device, there was a glass showcase that consisted of revolving four-sided metal box. The word "Stop" was painted in red and the word "Go" was painted in white on it.
3.	1912	American policeman Lester Wire, for the first time, designed the electric traffic light that was installed in Cleveland, Ohio, on August 5, 1914.
4.	1917	Interconnected traffic signal system was installed in Salt Lake City.
5.	1920	William Potts, a Detroit policeman invented the four-way and three-colored traffic lights. He introduced yellow lights as a sign of changeover of the traffic lights. The four-way and three-colored traffic lights were set up in Detroit.
6.	1920	Five signals on Broadway was installed in Los Angeles that were manufactured by the Acme Traffic Signal Co.
7.	1923	A patent was given to Garrett Morgan for an electric traffic signal. GE paid him \$40,000 for the invention.
8.	1928	A sonically actuated traffic light was developed by Charles Adler Jr. that was installed in Baltimore, United States.
9.	1929	First pedestrian-actuated signal was invented by Adler, which was installed in Baltimore.
10.	1950s	Computerised detection used in traffic lights.
11.	1960s	Advance computers could monitor traffic and change lights in an even more efficient way.
12.	1990s	Countdown timer was introduced to traffic lights to know the times of change of traffic light.

¹ Department of Transportation, "Traffic Control Systems Handbook", USA, June 1976, www.google.co.in

² <https://magazine.wsu.edu/web-extra/traffic-signals-a-brief-history>.



Traffic lights are also known as stoplights, road traffic lamps, traffic signals, stop and go lights. These signal devices are installed at road crossings, pedestrian crossings and other locations to control vehicular traffic. Traffic lights provide the right to way to road users by following universal colour codes (i.e. red, amber/yellow and green). A signal cycle indicates where turning on green light allows traffic to move ahead. The lighting of amber/yellow light represents transition time to drivers and illumination of red light indicates disallowance of vehicular movement.

The Vienna Convention on Road Signs and Signals Treaty encourages the countries to sign a treaty to follow an international standard for traffic control. The significance of different colour codes of the traffic control systems is further explained

Green Traffic Lights

Green traffic light, universally, indicates 'go or proceed' signal to drivers or pedestrians. It ensures that a vehicle can move ahead safely in the desired direction. The green colour is used in traffic light signals because it has a shorter wavelength and it could be spotted easily, even during the night. The different types of green light indicate the following signals:

- **Solid Green:** The solid green light indicates that an individual could move ahead through the intersection and need to look for the traffic which is moving straight through the intersection. The pedestrians and cyclists should be allowed to cross the intersection first.
- **Green Arrow:** The green arrow indicates that an individual could turn into the intersection after the pedestrians, cyclists and other traffic has passed through the passage. This implies that an individual doesn't need to stop for oncoming traffic.

Yellow Traffic Lights

The amber/ yellow lights are the most important among the three lights. This is so because yellow lights reflect the time of transition between red and green lights. It provides ample time to drivers to determine their move on the road and prevents accidents. The different types of amber/yellow lights indicate the following signals:

- **Stable Yellow:** A stable yellow light indicates that the signal is about to become red. Thus, this implies that driver needs to move with caution, if driver is already in transition. On the other hand, drivers should slow down and stop, if driver is not in transition.
- **Flashing Yellow:** A flashing yellow light indicates that the driver should proceed with caution while entering the intersection.
- **Steady Yellow Arrow:** A steady yellow arrow indicates the drivers could cross the intersection with caution, since not enough time is left before the light changes. A driver could proceed through the intersection once it is cleared.
- **Flashing Yellow Arrow:** A flashing yellow arrow is a new addition to traffic lights. It indicates that the driver could proceed through the intersection without waiting for the change of light. However, they should be careful about the oncoming traffic and enter the main road with caution.

Red Traffic Lights

Red traffic lights indicate the drivers to stop to allow the safe movement of traffic from other direction. Hence, it clearly provides right to way to everyone on road, both motorist and pedestrians. The different types of red light indicate the following types of signals:

- **Steady Red Light:** A steady red light signals that the driver need to stop and should wait for the light to become green. Crossing the intersection during the red light is considered

as violation of traffic rules in almost all countries.

- **Flashing Red Light:** A Flashing red lights indicates a driver to stop and proceed as soon the path gets clear. A driver need not wait for the green light.
- **Steady Red Arrows:** A steady red arrow indicates a driver to stop and proceed on the turn of the green light. In some countries, a steady red arrow is used as a signal to stop.
- **Flashing Red Arrows:** A flashing red arrow indicates that a driver needs to stop and could only proceed further when the path is clear to do so.

Objectives

The main objectives of the paper have been to:

- Determine the performance of automatic traffic lights in Chandigarh
- Study the perception of people and traffic police personnel regarding the working of automatic traffic lights in Chandigarh.

Research Methodology

The primary data was collected through a city-wide survey conducted at traffic light signals located in

various parts of the city. For data collection, a structured questionnaire was prepared and administered by a team of researchers. The questionnaire was administered at the traffic light signals located on five main paths of Chandigarh i.e. Udyog Path, Dakshin Marg, Vikas Marg, Jan Path and Madhya Marg. The team of researchers visited traffic light signals located on the above-mentioned Margs/Paths regularly for one week.

For the administration of questionnaires, such residents of Chandigarh city were selected as respondents who crossed the light points on a regular basis. In addition, twenty five (25) traffic police personnel who were deputed at traffic light points were interviewed. The observation method for data collection was also used. The data was analysed by means of percentages.

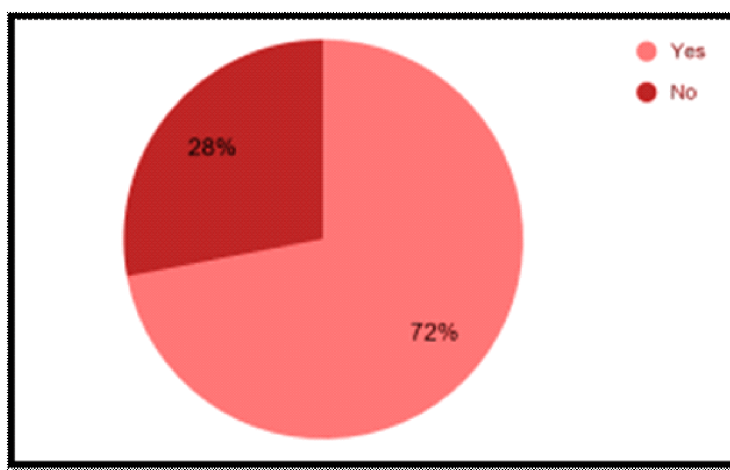
Findings of the Study

The major findings of the study have been discussed in detail below:

1. Satisfaction regarding Automatic Traffic Lights

Citizens' Satisfaction has been the prime concern of a welfare state. The satisfaction of citizens is an

Table 1.1
Satisfaction regarding Automatic Traffic Lights



Source: Primary Data

indicator of citizen's acceptance of various policies of the government implemented from time to time.

The automatic traffic light system has been well accepted by the citizens of Chandigarh. The automatic traffic light system has become a part and parcel of their routine life. It has been found that the majority of citizens i.e. 72% have been satisfied with the existing system of automatic traffic lights in the city. The residents believed that automatic traffic light systems have been highly useful in regulating the movement of traffic in the city.

Further, traffic police personnel also stated that automatic traffic lights have been highly

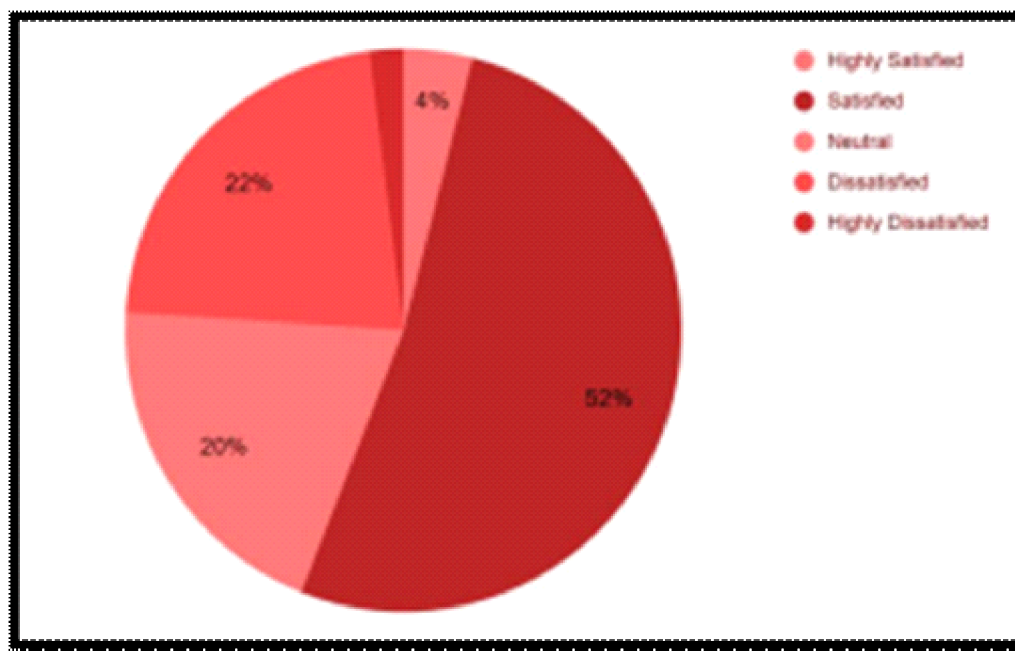
instrumental in orderly and systematic flow of vehicular traffic. The consequent decline in number of road mishaps and traffic rules violations apparently highlights the significance of automatic traffic lights in urban areas.

2. Level of Satisfaction regarding Automatic Traffic Lights

The level of satisfaction regarding automatic traffic lights has been measured on a five-points scale i.e. Highly Satisfied, Satisfied, Neutral, Dissatisfied and Highly Dissatisfied. The scale helps us to gauge the perception of citizens' and traffic police personnel regarding automatic traffic lights in a precise manner.

Table 1.2

Level of Satisfaction regarding Automatic Traffic Lights



Source: Primary Data

It is evident from Table 1.2 that the majority population has been satisfied with the system of automatic traffic lights. This implies that 52% of respondents have been found to be satisfied, 20% have been neutral, 22% have been dissatisfied and 2 % have been highly dissatisfied. Thus, it could be concluded that citizens recognize the utility of automatic traffic lights in the city.

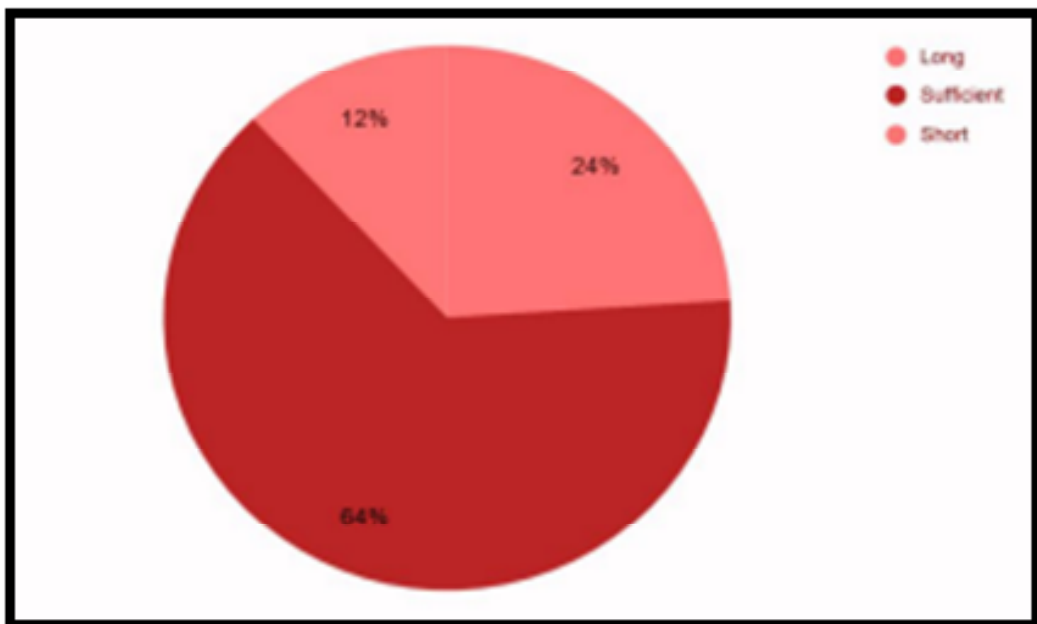
Likewise, traffic police personnel have been found to be satisfied regarding the working of automatic traffic lights that has helped them in ensuring smooth flow of traffic in the city.

3. Time cycle of Automatic Traffic Lights

The time cycle of automatic traffic lights is important to manage the automatic light control system throughout a city. This is so because the right cycle of time helps in regulating the traffic movement in a city. The duration of lights between two or more light signals helps in channelizing the on-going vehicles in different directions by reducing the chances of traffic congestion/ jams on roads. During peak hours, an appropriate time cycle helps the police personnel to monitor the movement of vehicles within the prescribed speed limit and reduce the chances of road mishaps and traffic violations.

Table 1.3

Time Cycle of Automatic Traffic Lights



Source: Primary Data

Table 1.3 presents the perception of citizens regarding the time cycle of automatic traffic lights in the city. It has been found that the majority i.e. 64% citizens believed that the timing of traffic lights

have been sufficient. It implies that the existing timings at each traffic light signal are neither too long nor too short. Thus, the majority citizens put forth that Chandigarh Traffic Police have set the

appropriate timings of automatic traffic lights. On the contrary, 24% citizens considered the duration of traffic lights to be long and only 12% citizens found the duration of traffic lights to be short.

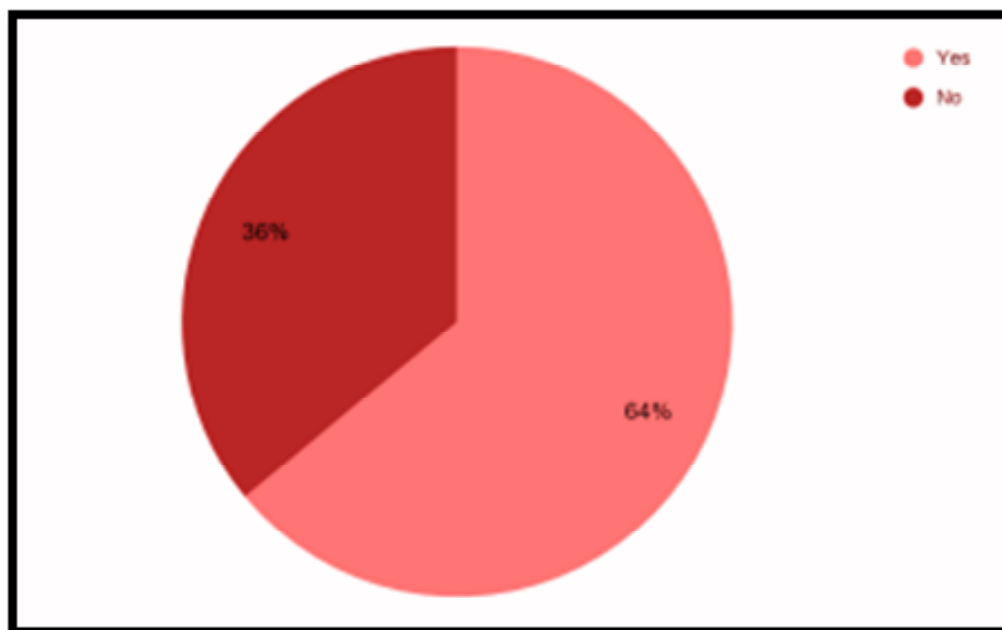
The traffic police personnel, also, believed that timings of traffic lights have been sufficient and provide adequate right of way to traffic from every direction. Hence, traffic from all direction get sufficient time to move from one side to another.

4. Modification of timings of Automatic Traffic Lights

Time/ Duration of lights have been a crucial element of the functioning of Automatic Traffic lights. The time determined at a particular light helps in the smooth movement of vehicles and avert traffic congestion. Hence, it is essential to modify the timings of traffic lights, from time to time, so as to ensure quick and easy flow of traffic.

Table 1.4

Modification of Time of Traffic Lights



Source: Primary Data

It is evident from Table 1.4 that citizens have been satisfied with the existing traffic light signals in the city. 64% of respondents stated that they don't feel the need to modify/ change the timings of traffic lights. The citizens found the current timings of traffic lights to be suitable and appropriate for movement of vehicular traffic.

Whereas, the traffic police personnel opined that there has been a need to modify the duration of traffic lights at some major traffic light points during peak hours to regulate the movement of vehicles.

It, therefore, can be concluded that the citizens and traffic police personnel are satisfied, to a great extent, with the existing traffic light control system to a great extent in Chandigarh.



Suggestions

The suggestion of the respondents has been divided into two categories: (i) Suggestions by police personnel and (ii) Suggestions by citizens

● Suggestions by Police Personnel

The police personnel deputed at various light signal points in the city have given the following suggestions:

- i. At Sector 38 west lights, it has been suggested that CCTVs should be installed at light points since the rate of traffic rule violation has been high. The side lights have not been visible to drivers.
- ii. At Sector 23/24 /36/37 lights, it has been suggested that zebra lines should be marked properly. The timing of yellow lights should be increased. Also, there is a need to install a rain shelter for police personnel near the roundabout.
- iii. At Gurdwara Sector 47, police personnel suggested that the colour of automatic lights should be red instead of green. This is so because the greencolour in automatic lights is not clearly visible to drivers.
- iv. At Sector 46/47/48/49 lights, police personnel suggested that the duration of light should be increased.
- v. At Sector 21/22/34/35, police personnel suggested that at Tribune Chowk there has been huge traffic congestion during peak hours. Thus, there is a need to increase the timings of lights.
- vi. At Sector 16 lights, police personnel suggested the need to mark zebra crossing on the road. Also there is a need to prune trees near the cycle track because it blocks the visibility of drivers of the cyclists coming from the other side.
- vii. At Sector 8/7/18/19 lights, police personnel suggested that zebra crossing on the road needs to be marked because in its absence people don't stop their vehicles at an appropriate distance from the moving traffic while waiting for the light. Further, it is necessary to install CCTVs on these light points. Also, there is a need to look into the maintenance of cycle tracks. During the evening, cyclists don't prefer to use cycle tracks because of the absence of street lights and also there are numerous potholes on them.
- viii. At PGI roundabout, police personnel said that they operate the traffic manually because of the huge flow of traffic during peak hours. Hence, there is a need to increase the duration of lights during peak hours.
- ix. At Sector 32 Hospital roundabout, police personnel suggested that zebra crossings need to be marked. Also, there is a need to widen the roads near the roundabout. This is so because the joining roads to the roundabout are quite wide, however, the width of roads near the roundabout is narrow. This, therefore, leads to traffic congestion irrespective of the system of automatic lights.

Hence, the suggestions given by police personnel have highlighted the important aspect of traffic regulation which could contribute to greater efficiency of the automatic traffic light system of the city.

● Suggestions by Citizens

The citizens, though, have been found to be satisfied with the existing system of automatic



traffic lights in the city. Nevertheless, following suggestions have been made by them to improve its working.

- i. At traffic lights, people stand on the wrong side which causes accidents. Therefore, some indicators should be put to help people, mainly the outsiders who are unaware about the directions.
- ii. During peak hours, there is a need to depute more police personnel at every light point to regulate traffic and check traffic violations.
- iii. During peak hours, there is a need to reduce the timings of red lights to avoid traffic congestion.
- iv. Traffic Lights should be installed at all slip roads in the city so as to curb road accidents.
- v. There is a need to install CCTVs at every traffic light point ranging upto 1Kms
- vi. The timings of green lights should be increased at major light points such as Railway lights, Housing Board Chowk, Tribune Chowk and so on.
- vii. Some citizens suggested construction of flyovers and underpasses at major light points mainly, the entry and exit points to the city.
- viii. School bus drivers suggested that during morning separate lanes for school buses should be marked since the drivers have limited time and have to wait long at traffic lights.
- ix. Cyclists should be challaned for not using cycle tracks and at times comes in the way of motor vehicles. Also, they should be barred from using cell phones on the road.
- x. There is a need to widen the roads in view of increasing number of vehicular traffic. Since narrow roads cause congestion at traffic lights.

Conclusion

The Automatic Traffic Light system has been an integral part of traffic management in urban areas. They have been, largely, successful in orderly movement of traffic and in preventing road mishaps. Thus, traffic lights are highly imperative in current times. The residents of Chandigarh considered that traffic light control systems in the city have been performing in an efficient manner. However, they believed that there is a need to revamp the system to address the increasing percentage of vehicular traffic in the city. Though the residents abide by the traffic light rules yet there is a need to address the upcoming problem of traffic congestion.

The Importance of Cloud Platforms for Modern Policing : Enhancing Efficiency, Collaboration and Data Security



Pratik Jain*

Abstract

This scholarly article explores the significance of cloud platforms in modern policing and highlights their potential to revolutionize law enforcement practices. Cloud computing technology has gained widespread recognition as an essential tool for numerous industries, and law enforcement agencies including international organizations like INTERPOL can significantly benefit from adopting cloud-based solutions. This paper delves into the various advantages offered by cloud platforms to police departments, including improved data management, enhanced collaboration, increased operational efficiency, and strengthened data security.

Keywords: *Cloud platforms, Modern policing, INTERPOL, Collaboration, Data security, Advanced analytics, AI applications, Enhanced mobility, Disaster recovery*

Introduction

Cloud computing allows businesses to access and store data and applications over the internet, providing flexibility and scalability. It highlights benefits such as cost-effectiveness, accessibility, and enhanced collaboration. However, it also emphasizes the importance of managing security and privacy risks associated with cloud adoption, recommending measures like data encryption and secure authentication to protect sensitive information. Law enforcement agencies have also recognized the potential of cloud platforms in

enhancing their policing capabilities. This scholarly article aims to explore the importance of cloud platform adoption for police departments and highlight the key benefits and challenges associated with this technological shift.

Applications of Cloud-Based Digital Transformation in INTERPOL

Modern law enforcement agencies, including international organizations like the International Criminal Police Organization (INTERPOL), are increasingly turning to cloud-based digital transformation to enhance their capabilities.

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INTERPOL is an inter-governmental organization consisting of 194 member nations, dedicated to collaborating with law enforcement agencies worldwide to enhance global safety and security. In this section, we will delve into how cloud platforms enables INTERPOL to improve efficiency, foster collaboration among international law enforcement agencies, ensure data security, and address ethical considerations.

Enhancing Efficiency Through Cloud-Based Tools

Cloud platforms offer law enforcement agencies a suite of tools that significantly enhance operational efficiency. INTERPOL, as a global policing organization can leverage on these capabilities to streamline its operations and better serve its mission.

1. **Real-Time Data Access and Analysis:** INTERPOL can harness the power of cloud-based solutions to access and analyze data in real-time. This capability is instrumental in monitoring global criminal activities, identifying trends, and responding swiftly to emerging threats. By providing law enforcement officers with up-to-date information, cloud platforms empower INTERPOL to make informed decisions and take timely action.
2. **Streamlined Administrative Processes:** Administrative tasks often consume valuable time and resources in any organization, including law enforcement agencies. Cloud-based solutions simplify these processes, allowing INTERPOL to allocate its resources more effectively. The reduction in administrative overhead translates to cost savings and improved operational efficiency.
3. **Predictive Policing and Crime Prevention:** Cloud platforms equipped with advanced

analytics and machine learning algorithms enable INTERPOL to engage in predictive policing. By analyzing historical data and identifying patterns, INTERPOL can proactively intervene in criminal activities and prevent them before they escalate. Successful case studies from other law enforcement agencies around the world serve as testaments to the effectiveness of predictive policing powered by cloud technology.

Fostering Collaboration among International Law Enforcement Agencies

INTERPOL's primary strength lies in its ability to facilitate cooperation among law enforcement agencies across the globe. Cloud platforms play a pivotal role in overcoming the challenges associated with international collaboration.

1. **Challenges in Inter-Agency Collaboration:** International law enforcement collaboration often faces challenges related to disparate IT infrastructures and communication systems. Cloud platforms provide a standardized and interoperable environment, enabling seamless information sharing among INTERPOL's member countries and partner agencies. Language barriers and cultural differences can also be mitigated through cloud-based collaboration tools, making global cooperation more accessible.
2. **Role of Cloud Platforms in Promoting Cooperation:** INTERPOL can utilize cloud-based collaboration tools to foster information exchange, intelligence sharing, and coordinated operations. The real-time nature of these tools facilitates swift communication and joint decision-making, even across borders. Case studies of successful international operations against

transnational criminal organizations serve as prime examples of how cloud platforms enhance collaboration on a global scale.

Ensuring Data Security and Addressing Ethical Considerations

Protecting sensitive data is paramount, especially in law enforcement. INTERPOL, while benefiting from cloud-based solutions, must prioritize data security and address ethical and privacy concerns.

1. **Concerns and Risks Related to Data Security:** INTERPOL deals with highly confidential data, including information pertaining to transnational criminal organizations and terrorism. This section discusses potential risks associated with cloud-based data storage and transmission, including data breaches and unauthorized access.
2. **Security Measures and Protocols in Cloud Platforms:** INTERPOL can implement robust security measures, such as encryption, multi-factor authentication, and regular security audits, to safeguard its data. Compliance with international data protection standards is crucial for ensuring secure data handling. Examining successful case studies of law enforcement agencies strengthening data security can serve as a practical guide for INTERPOL's security strategy.
3. **Ethical and Privacy Considerations:** This part addresses the challenge of balancing public safety with individual privacy and civil liberties. By promoting transparency, conducting privacy impact assessments, and adhering to legal and ethical standards, INTERPOL can maintain public trust while harnessing the power of cloud-based technologies. Case studies of agencies that

have effectively navigated these challenges can provide valuable insights.

Data Storage and Accessibility

Data storage and accessibility are crucial aspects for law enforcement agencies as they handle vast amounts of sensitive information, including criminal data, evidence, video footage etc. Cloud platforms offer scalable and secure solutions for storing and managing this data, ensuring easy access for authorized personnel anytime, anywhere. Below is a detailed explanation with examples of cloud providers:

1. **Scalability:** Traditional on-premises data storage solutions have limitations in terms of capacity, and scaling up requires significant investment in hardware and infrastructure. Cloud providers, on the other hand, offer scalable storage options, allowing law enforcement agencies to adjust their storage requirements based on demand. For instance, Amazon Web Services (AWS) provides Amazon S3 (Simple Storage Service), which allows users to store and retrieve any amount of data at any time, accommodating dynamic storage needs efficiently.
2. **Accessibility:** Cloud platforms enable authorized personnel to access data securely from various devices with an internet connection. This accessibility is particularly valuable for officers in the field who need real-time access to critical information. Microsoft Azure, for example, offers Azure Files, a fully managed cloud file share accessible via Server Message Block (SMB) protocol. It enables officers to access shared files and resources securely from their laptops or mobile devices while on duty.



3. **Hybrid Cloud Solutions:** Some law enforcement agencies might have specific data security or compliance requirements that demand a combination of on-premises and cloud storage. Hybrid cloud solutions, like those offered by Google Cloud Platform (GCP), allow agencies to store sensitive data on-premises while utilizing the cloud for less sensitive or publicly accessible information. This approach provides a balance between data security and accessibility.

Example: The Los Angeles Police Department (LAPD) uses AWS GovCloud to securely store and manage its body camera footage and other data. By leveraging the cloud, LAPD can efficiently manage the large volume of video data generated daily and provide authorized personnel with quick access to critical evidence during investigations.

Real-time Collaboration

Effective collaboration is vital for law enforcement agencies as they often need to share critical information and work together across different jurisdictions and departments. Cloud platforms offer real-time collaboration tools that facilitate seamless communication and data sharing. Following is a more detailed explanation with examples of cloud providers:

1. **Instant Messaging and Video Conferencing:** Cloud-based communication tools, such as Microsoft Teams or Slack, enable officers and investigators to communicate with each other instantly. They can share updates, discuss ongoing cases, and hold virtual meetings in real-time. These platforms support text, voice, and video communication, fostering better collaboration regardless of the geographical locations of the participants.

2. **Collaborative Document Editing:** Google Workspace (formerly G Suite) offers cloud-based tools like Google Docs and Google Sheets, which allow multiple users to collaborate on the same document simultaneously. Law enforcement teams can work together on reports, witness statements, and other critical documents in real-time, improving efficiency and reducing version control issues.

3. **Data Sharing across Agencies:** Cloud platforms facilitate secure data sharing between different law enforcement agencies, helping them pool resources and intelligence. For instance, AWS offers the AWS Data Exchange, where authorized organizations can access and share data securely, enabling cross-agency collaboration on projects and investigations.

Example: The Federal Bureau of Investigation (FBI) uses Microsoft Teams for real-time collaboration among its agents, analysts, and support staff. The platform enables instant communication, file sharing, and virtual meetings, ensuring that teams can work together efficiently, even when located in different offices or field locations.

Enhanced Mobility

Enhanced mobility is the ability for law enforcement officers and personnel to access critical resources, data, and communication tools on the go, using various mobile devices such as smartphones, tablets, or laptops. This mobility is essential in modern policing as it allows officers to be more responsive, efficient, and effective in their duties, regardless of their location.

1. **Mobile Access to Information:** Cloud platforms enable law enforcement agencies to store and access data securely in the cloud, making it accessible to officers in the



field. Officers can retrieve information about suspects, vehicles, previous incidents, and other relevant data in real-time, providing them with valuable insights to make informed decisions quickly.

2. **Remote Reporting and Incident Management:** Mobile apps and cloud-based systems allow officers to file incident reports, upload evidence, and update case information from the field. This streamlines administrative tasks and ensures that important data is captured promptly, eliminating the need to return to the office to complete paperwork.
3. **Real-time Communication:** Mobile devices equipped with communication apps or cloud-based collaboration tools enable officers to stay connected with their teams and supervisors at all times. They can share updates, request assistance, and receive important instructions without delays, improving coordination during operations.

Example: Many police departments have adopted mobile policing apps like "CopApp" or "CopCast," which provide officers with access to databases, crime mapping, real-time alerts, and communication tools. For instance, the New York City Police Department (NYPD) deployed a mobile app that allows officers to access information on wanted suspects, missing persons, and crime patterns directly from their smartphones while on patrol.

Data Security and Privacy

Data security and privacy are critical aspects for law enforcement agencies as they handle sensitive information, such as personal details of citizens, investigative data, and evidence. Breaches or unauthorized access to this data can have severe consequences and erode public trust. Cloud

platforms offer robust security measures to safeguard data and ensure compliance with privacy regulations.

1. **Encryption:** Cloud providers use encryption techniques to protect data both during transmission and while stored in their servers. This ensures that even if unauthorized individuals gain access to the data, it remains unintelligible without the encryption keys.
2. **Access Controls:** Cloud platforms implement strict access controls, allowing administrators to define and manage who can access specific data and resources. Multi-factor authentication further enhances security by requiring additional verification steps beyond just a username and password.
3. **Compliance with Regulations:** Reputable cloud service providers comply with various data protection regulations, such as the General Data Protection Regulation (GDPR) and the Health Insurance Portability and Accountability Act (HIPAA). This compliance ensures that law enforcement agencies adhere to legal requirements and maintain the privacy rights of individuals.
4. **Data Redundancy and Backups:** Cloud providers often implement data redundancy and regular backups to ensure that data remains accessible and recoverable in the event of hardware failures, disasters, or cyberattacks.

Example: Microsoft Azure Government Cloud, specifically designed for U.S. government agencies, including law enforcement, adheres to stringent security and compliance standards, including FedRAMP (Federal Risk and Authorization Management Program) and CJIS (Criminal Justice Information Services) requirements.



These security measures and certifications assure law enforcement agencies that their data is handled with the highest levels of protection and confidentiality.

Scalability and Cost-effectiveness

Scalability and cost-effectiveness are two crucial benefits that cloud platforms offer to law enforcement agencies. These advantages address the challenges of managing fluctuating workloads and optimizing IT resources efficiently.

1. **Resource Flexibility:** Cloud platforms provide law enforcement agencies with the flexibility to scale their IT resources up or down based on demand. During peak periods or large-scale operations, agencies can quickly allocate additional computing power, storage, and networking resources. Conversely, during periods of reduced activity, they can reduce resource allocation, saving costs on unnecessary infrastructure.
2. **Pay-as-you-go Model:** Cloud services often operate on a pay-as-you-go or subscription-based pricing model. This means that agencies only pay for the resources they use and the duration of their usage. It eliminates the need for significant upfront capital expenditure on hardware and infrastructure, allowing agencies to align their IT costs with their actual needs.
3. **Reduced Maintenance and Overhead Costs:** With cloud platforms, law enforcement agencies do not need to invest in maintaining and managing physical servers. Cloud service providers handle the infrastructure management, including hardware updates, software patches, and security measures, reducing the burden on agency IT staff and lowering maintenance costs.

4. **Economies of Scale:** Cloud providers serve a vast number of customers, which allows them to benefit from economies of scale. This means that they can offer services at lower costs than what individual agencies might incur if they were to build and manage their own infrastructure.

Example: The New Zealand Police is an example of a law enforcement agency that moved its data infrastructure to the cloud to achieve scalability and cost savings. By migrating to Microsoft Azure, the agency was able to reduce its data center footprint, leading to substantial savings in operational and maintenance costs while ensuring scalability to accommodate future growth.

Advanced Analytics and AI Applications

Advanced analytics and AI applications have the potential to transform law enforcement by providing valuable insights, automating processes, and enhancing decision-making capabilities. Cloud platforms serve as the foundation for deploying and running these data-driven solutions.

1. **Data Processing and Analysis:** Cloud platforms offer high-performance computing capabilities that allow law enforcement agencies to process and analyze vast amounts of data quickly. From analyzing crime patterns to performing sentiment analysis on social media, cloud-based analytics can help agencies uncover valuable insights that might not be apparent through manual examination.
2. **Predictive Policing:** AI-powered predictive policing models leverage historical crime data to identify patterns and trends, enabling law enforcement agencies to allocate resources more effectively and proactively address potential crime hotspots. This data-driven

approach can lead to crime prevention and early intervention.

3. **Facial Recognition and Biometrics:** Cloud-based facial recognition services can aid law enforcement agencies in identifying suspects and missing persons quickly. By comparing images against vast databases, cloud platforms can significantly speed up the identification process.
4. **Natural Language Processing (NLP):** NLP applications can help agencies analyze large volumes of unstructured data, such as witness statements, police reports, and social media content. NLP can extract valuable information, identify sentiment, and flag potential threats, enhancing the investigative process.

Example: The Chicago Police Department partnered with the University of Chicago's Data Science for Social Good program and utilized advanced analytics and AI algorithms to predict potential gun violence hotspots. By leveraging cloud-based resources for data processing and analytics, they were able to make data-driven decisions and deploy resources more effectively to prevent gun violence in high-risk areas.

Disaster Recovery and Redundancy

Disaster recovery and redundancy are critical components of cloud platforms that ensure data and services remain available even in the face of unexpected events or failures. In the context of law enforcement, where data integrity and continuous access to information are paramount, these features are particularly crucial.

1. **Data Redundancy:** Cloud providers maintain multiple copies of data across geographically dispersed data centers. This redundancy ensures that if one data center experiences

an outage or data loss, there are redundant copies available in other locations, safeguarding data integrity and availability.

2. **High Availability:** Cloud platforms offer high availability architectures that minimize downtime by automatically redirecting traffic to functional servers if one server or data center fails. This ensures that critical systems, applications, and data remain accessible without interruption.
3. **Disaster Recovery Planning:** Cloud providers implement robust disaster recovery plans to handle catastrophic events. These plans include procedures for data restoration and service recovery, minimizing the impact of potential disasters on law enforcement operations.
4. **Automated Backups:** Cloud platforms often include automated backup solutions, allowing agencies to schedule regular backups of their data and settings. This ensures that recent data is always available for recovery in case of accidental deletions or data corruption.

Example: The Metropolitan Police Service in London, UK, utilizes cloud-based disaster recovery solutions to protect its critical data and maintain service continuity. By replicating data across multiple cloud regions, they ensure that essential systems, such as the emergency dispatch system, remain operational even during unforeseen events.

Transparency and Accountability

Transparency and accountability are vital aspects of law enforcement agencies' operations to maintain public trust and ensure responsible use of data and resources. Cloud platforms can contribute to achieving these goals in the following ways:



1. **Auditing and Logging:** Cloud providers offer comprehensive auditing and logging capabilities that allow administrators to monitor and track user activities within the system. This transparency ensures that access to sensitive data and actions taken are recorded, creating an audit trail for accountability purposes.
2. **Access Controls:** Cloud platforms enable granular access controls, ensuring that only authorized personnel can access specific data and resources. This helps prevent unauthorized access and misuse of information, promoting transparency in data handling.
3. **Compliance Reporting:** Cloud providers often comply with various security standards and industry regulations. Law enforcement agencies can leverage compliance reports provided by cloud providers to demonstrate adherence to data protection and privacy regulations, enhancing transparency with the public and relevant authorities.
4. **Open Data Initiatives:** Some law enforcement agencies adopt open data initiatives, using cloud platforms to share non-sensitive data with the public proactively. This practice fosters transparency by allowing citizens to access and analyze certain information, promoting accountability and trust.

Example: The Seattle Police Department launched its "Crime Dashboard," a cloud-based platform that provides real-time data on reported crimes, arrests, and 911 calls. This initiative promotes transparency and accountability by making law enforcement data accessible to the public, fostering community engagement and trust.

Conclusion

Cloud platforms have become indispensable for modern policing as they offer numerous benefits, including enhanced efficiency, collaboration, data security, mobility, scalability, cost-effectiveness, advanced analytics, and disaster recovery. By leveraging cloud solutions, law enforcement agencies including international organizations like INTERPOL can harness the power of real-time information, data analytics, and collaboration tools to improve crime-solving capabilities, allocate resources effectively, and ensure public safety. Moreover, the transparency and accountability features of cloud platforms enable agencies to maintain public trust, uphold data privacy, and demonstrate responsible practices in data management. Overall, cloud platforms provide law enforcement agencies with the technological foundation to meet the challenges of today's interconnected world and fulfill their mission to protect and serve their communities effectively.

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